
EAST ST. LOUIS FLOOD PROTECTION REHABILITATION PROJECT

METRO-EAST SANITARY DISTRICT

**MISSISSIPPI RIVER
MADISON AND ST. CLAIR COUNTIES, ILLINOIS**

SPECIFICATIONS FOR

MISCELLANEOUS PUMP STATION REPAIRS

SOLICITATION NO. DACW43-02-R-0722

**THIS IS A NEGOTIATED CONTRACT
SECTION 8(A) SMALL BUSINESS ACT**



**US Army Corps
of Engineers
St. Louis District**

Gateway to Excellence

AUGUST 2002

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DESIGN AUTHENTICATION

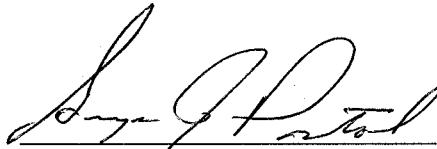
This project was designed by the St. Louis District, U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear on these project documents within the scope of their employment as required by ER 1110-1-8152.



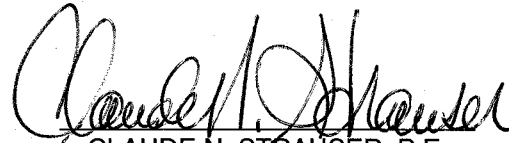
MELVIN W. BALDUS, P.E.
Chief, Engineering Division



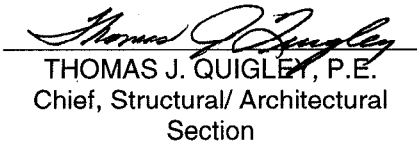
BOBBY R. HUGHEY, P.E.
Chief, Design Branch



GEORGE J. POSTOL, P.E.
Chief, Geotechnical Branch



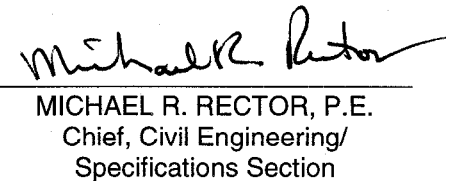
CLAUDE N. STRAUSER, P.E.
Chief, Hydrologic & Hydraulics
Branch



THOMAS J. QUIGLEY, P.E.
Chief, Structural/ Architectural
Section



GARY M. JONES
Chief, Mechanical/ Electrical
Section



MICHAEL R. RECTOR, P.E.
Chief, Civil Engineering/
Specifications Section

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SOLICITATION, OFFER, AND AWARD (Continued)*(Construction, Alteration, or Repair)***OFFER (Must be fully completed by offeror)**

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)		15. TELEPHONE NO. (Include area code)
		16. REMITTANCE ADDRESS (Include only if different than Item 14) See Item 14
CODE	FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS	SEE SCHEDULE OF PRICES
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18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS*(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)*

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20B. SIGNATURE	20C. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 41 U.S.C. 253(c)
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26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY: CODE
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CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.	<input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation, is hereby accepted as to the items listed. This award commutes the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)		31A. NAME OF CONTRACTING OFFICER (Type or print)	
30B. SIGNATURE	30C. DATE	TEL: EMAIL:	
		31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

TOC.11

COVER

BIDDING REQUIREMENTS, CONTRACT FORMS AND CONTRACT CONDITIONS

SF 1442	SOLICITATION, OFFER, AND AWARD	
00010	BIDDING SCHEDULE	00010-1
00100	INSTRUCTIONS TO BIDDERS	00100-1
00600	SOLICITATION PROVISIONS	00600-1
00700	CONTRACT CLAUSES	00700-1
	WAGE RATES	IL 17/07
00800	SPECIAL CLAUSES	00800-1

DIVISION 1 - GENERAL REQUIREMENTS

01025	MEASUREMENT AND PAYMENT	01025-1
01090	SOURCES FOR REFERENCE PUBLICATIONS	01090-1
01130	ENVIRONMENTAL PROTECTION	01130-1
01300	SUBMITTAL PROCEDURES	01300-1
01320	PROJECT SCHEDULE	01320-1
01440	CONTRACTOR QUALITY CONTROL	01440-1
01500	TEMPORARY CONSTRUCTION FACILITIES	01500-1

DIVISION 2 - SITE WORK

02200	CARE OF WATER	02200-1
02540	WASTEWATER COLLECTION SYSTEM	02540-1
02840	STAFF GAGES	02840-1

DIVISIONS 3 AND 4

(NOT USED)

DIVISION 5 - METALS

05500	DISCHARGE CHAMBER ROOF SLAB JOINT REPAIRS - NORTH PUMP STATION	05500-1
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DIVISIONS 6 THRU 14

(NOT USED)

DIVISION 15 - MECHANICAL

15100	PUMP REHABILITATION - NORTH PUMP STATION	15100-1
15200	SUBMERSIBLE PUMP, CENTRIFUGAL, MIXED-FLOW TYPE - EAST ST. LOUIS PUMP STATION	15200-1
15300	FLEXIBLE FLAP VALVES - EAST ST. LOUIS PUMP STATION	15300-1

DIVISION 16 - ELECTRICAL

16050	ELECTRIC WORK	16050-1
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Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERIVES	QTY	UNIT	UNIT PRICE	AMOUNT
0001	Discharge Chamber Roof North Pump Station	1	Lump Sum	\$_____	\$_____

ITEM NO	SUPPLIES/SERIVES	QTY	UNIT	UNIT PRICE	AMOUNT
0002	Staff Gages	1	Lump Sum	\$_____	\$_____

ITEM NO	SUPPLIES/SERIVES	QTY	UNIT	UNIT PRICE	AMOUNT
0003	Deep Well Pump and Motor Rehab North Pump Station	1	Lump Sum	\$_____	\$_____

ITEM NO	SUPPLIES/SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
0004	Base Flow Pump East St. Louis Pump Station	1	Lump Sum	\$_____	\$_____

ITEM NO	SUPPLIES/SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
0005	Flexible Flap Valves East St. Louis Pump Station	1	Lump Sum	\$_____	\$_____

ITEM NO	SUPPLIES/SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
0006	Relocate Vent Pipe Madison Pump Station	1	Lump Sum	\$_____	\$_____

TOTAL \$_____

BIDDING SCHEDULE NOTES

1. When bids are solicited on a unit price basis, bidders shall insert in the spaces provided therefor in the SCHEDULE both the "unit price" and the "estimated amount" resulting from applying the said unit price to the estimated quantity shown. In the event the bidder quotes on a total price ("estimated amount") in its bid and fails to quote the unit price, the Government will determine such unit price by dividing the total price quoted by the quantity of the item set out in the SCHEDULE. The bidder

agrees that the unit price so determined shall be used for the purpose of bid evaluation, award and all payments to the Contractor including final payment.

2. All extensions of the unit prices shown will be subject to verification by the Government. In case of variation between the unit price and the extension, the unit price will be considered to be the bid and the extension will be corrected accordingly.
3. If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.
4. Bidders are required to bid on all items listed on the Bidding Schedule in addition to inserting a total quoted bid in the appropriate space provided.

Bidders are encouraged to pay particular attention to the requirements on lab “validation” in Section 01440 of the contract specifications.

Section 00100 - Bidding Schedule/Instructions to Bidders

AUTHORIZATION

This contract is affected pursuant to 10 USC 2304.
(end of clause)

TELEGRAPHIC MODIFICATION

Telegraphic bids/offers are not authorized, however; modification or withdrawal of bids/offers by telegram is authorized provided telegraphic notice is submitted so as to be received in the office designated in this Solicitation not later than the exact time set for opening of bids/receipt of proposals. The telegraphic modification or withdrawal received in such office by telephone from the receiving telegraph office not later than the time set for opening of bids/receipt of proposals shall be considered if such message is confirmed by the telegraph company by sending a copy of the telegram which formed the basis for the telephone call. NOTE: The term "telegram" includes mailgrams.

(end of clause)

SITE OF THE WORK

Bidders are advised that for the purpose of applicability of the Davis -Beacon Act and other contract labor standards provisions, "the site of the work" under the contract to be awarded pursuant to this Solicitation may not be limited to the physical places(s) where the construction called for in the contract will remain when work on it has been completed. The "site of the work" may include other adjacent or nearby property used by the contractor or subcontractors during such construction. For example, fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, etc., will be considered part of the site of the work, provided they are dedicated exclusively or nearly so to performance on the contract and are so located in proximity to the actual construction location that it would be reasonable to include them.

(end of clause)

VALUE ENGINEERING (VE) PAYMENT TO CONTRACTORS

Value Engineering. Special attention is invited to the Contract Clause entitled, "Value Engineering – Construction". The St. Louis District policy to authorize immediate payment to contractors for their portion of VECP savings is an important step in providing adequate incentive to contractors for their support of this program. Carefully review the contract documents for potential savings and submit ideas promptly upon award to maximize savings.

WORKING TO BE PERFORMED BY CONTRACTOR'S OWN ORGANIZATION

Within five days after award the successful bidder/contractor must furnish the Contracting Officer a description of items of work which will be performed with its own forces and the estimated cost of those items.

(end of clause)

EQUIPMENT OWNERSHIP AND OPERATION EXPENSE SCHEDULE

Whenever a modification or equitable adjustment of contract price is required, the Contractor's cost proposals for equipment ownership and operation expenses shall be determined in accordance with the requirements of Section 00700, Special Clause entitled EQUIPMENT OWNERSHIP AND OPERATION EXPENSE SCHEDULE. A copy of EP 1110-1-8 "Construction Equipment Ownership and Operation

Expense Schedule” is available for review by bonafide bidders in the St. Louis District, Corps of Engineers, Technical Library, Room 4.202, Ray Building, 1222 Spruce Street, St. Louis, Missouri 63103-2833, Telephone 314-331-8883, FAX 314-331-8873; for additional information call or write to:

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954
Telephone 202-783-3238;

Or may be purchased from:

U.S. Government Regional Bookstore
No. 120 Bannister Mall
5600 East Bannister Road
Kansas City, MO 64137
Telephone 816-767-8225

(end of clause)

BONDS

a. BID BOND/BID GUARANTEE – Each bidder shall submit WITH HIS/HER BID a Bid/Bond Guarantee in the amount and form prescribed in Section 00700, Contract Clause FAR 52.228-1, “BID GUARANTEE”.

b. PERFORMANCE AND PAYMENT BONDS – Within 10 days after the prescribed forms are presented to the successful bidder, Performance and Payment bonds in good and sufficient surety or sureties acceptable to the Government shall be furnished. The requirement is further discussed in Contract Clause FAR 52.228-15, “PERFORMANCE AND PAYMENT BONDS- CONSTRUCTION”. Performance and Payment bonds shall be furnished by the Contractor to the Government prior to commencement of contract performance.

(end of clause)

STATES OF MISSOURI AND ILLINOIS SALES TAX

After contract award, the successful Contractor, his/her subcontractors and materials suppliers, may claim an exemption from Missouri and/or Illinois sales tax on federal construction projects. UPON REQUEST, the Contracting Officer will provide the appropriate tax exempt certificate.

(end clause)

CLAUSES INCORPORATED BY FULL TEXT

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 99)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at <http://www.customerservice@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(End of provision)

52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)—ALTERNATE IV (OCT 1997)

- (a) Submission of cost or pricing data is not required.
 - (b) Contractor may be required to submit other than cost or pricing data as prescribed in FAR 15.403-3
- (End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Firm-fixed price contract resulting from this solicitation.

(End of clause)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

- (a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
11.4	6.9

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **Madison and St. Clair Counties, Illinois**.

(End of provision)

52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act--Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as non-responsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.233-2 SERVICE OF PROTEST (AUG 1996)

(c) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from :

Contracting Officer
U.S. Army Corps of Engineers
1222 Spruce Street, Room 4.207
St. Louis, Missouri 63103-2833

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:

Name: Mike Feldmann

Address: Central Area Office
301 Riverlands Way
PO Box 337
West Alton, MO 63386-0377

Telephone: 636-899-2600

(End of provision)

52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words "no proposal" in the space provided for any item on which no price is submitted.

(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

(End of provision)

Section 00600 - Representations & Certifications

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52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(a) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(1) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of provision)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to

Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(b) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

“Common parent,” as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

“Taxpayer Identification Number (TIN),” as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN:_____

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business

Program Representations, of this solicitation.] The offeror represents that it () is a women-owned business concern.

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals --

(A) Are () are not () presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have () have not (), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are () are not () presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has () has not (), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an

erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 22132.

(2) The small business size standard is \$5 Million.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It () is, () is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It () is, () is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls :

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [] is, [] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues

____ 50 or fewer ____ \$1 million or less

____ 51 - 100 ____ \$1,000,001 - \$2 million

____ 101 - 250 ____ \$2,000,001 - \$3.5 million

____ 251 - 500 ____ \$3,500,001 - \$5 million

____ 501 - 750 ____ \$5,000,001 - \$10 million

____ 751 - 1,000 ____ \$10,000,001 - \$17 million

____ Over 1,000 ____ Over \$17 million

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) ☐ It has, ☐ has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) ☐ It has, ☐ has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

☐ (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

☐ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

☐ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

(End of clause)

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

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Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (DEC 2001) --ALTERNATE I (MAY 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) "Commercial component" means any component that is a commercial item.

(c) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that--

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;

(2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;

(3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for--

(i) Modifications of a type customarily available in the commercial marketplace; or

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;

(4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;

(5) Installation services, maintenance services, repair services, training services, and other services if--

(i) Such services are procured for support of an item referred to in paragraph (c)(1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and

(ii) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;

(6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed. For purposes of these services--

(i) Catalog price means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and

(ii) Market prices means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.

(7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or

(8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

(d) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(e) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(End of clause)

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor

employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but

excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

- (1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an

employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting

from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 11 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **120 days**. The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$805.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-18 VARIATION IN ESTIMATED QUANTITY (APR 1984)

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgement of the Contracting Officer, is justified.

52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right

to examine and audit all of the Contractor's records, including computations and projections, related to--

- (1) The proposal for the contract, subcontract, or modification;
 - (2) The discussions conducted on the proposal(s), including those related to negotiating;
 - (3) Pricing of the contract, subcontract, or modification; or
 - (4) Performance of the contract, subcontract or modification.
- (d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.
- (2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.
- (e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.
- (f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--
- (1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and
 - (2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.
 - (g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--
 - (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
 - (2) For which cost or pricing data are required; or
 - (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

- (a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)—ALTERNATE IV (OCT 1997)

(a) Submission of cost or pricing data is not required.

(b) Provide information described below: Contractor may be required to submit other than cost or pricing data as prescribed in FAR 15.403-3

(End of clause)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

52.219-14 LIMITATIONS ON SUBCONTRACTING (DEC 1996)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(End of clause)

52.222-3 CONVICT LABOR (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(a)(1) The worker is paid or is in an approved work training program on a voluntary basis;

(2) Representatives of local union central bodies or similar labor union organizations have been consulted;

(3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and

(4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a

similar nature in the locality in which the work is being performed; and

(b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION.
(SEP 2000)

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis -Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis -Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a

fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(a) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis -Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis -Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis -Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis -Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis -Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe

benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(End of clause)

52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis -Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis -Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's

signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis -Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis -Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis -Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis -Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis -Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast

Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and

female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc.,

opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its

efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

52.222-35 AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (APR 1998)

(a)) Definitions. As used in this clause--

All employment openings includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment.

Appropriate office of the State employment service system means the local office of the Federal-State national system of public employment offices with assigned responsibility to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

Positions that will be filled from within the Contractor's organization means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings that the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964, and May 7, 1975, and was discharged or released therefrom with other than a dishonorable discharge; or

(2) Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed between August 5, 1964, and May 7, 1975.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a disabled veteran or a veteran of the Vietnam era. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise

treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans' status in all employment practices such as--

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their employment openings with the appropriate office of the State employment service.

(3) The listing of employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is

committed to take affirmative action to employ, and advance in employment, qualified disabled veterans and veterans of the Vietnam Era.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor, including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower

the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)

(a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material	Identification No.
(If none, insert "None")	

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(a) Definitions. As used in this clause --

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

- (i) Abide by the terms of the statement; and
 - (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
- (5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
- (6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
- (i) Taking appropriate personnel action against such employee, up to and including termination; or
 - (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and
- (7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.
- (c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.
- (d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.
- (End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

- (a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.
- (b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--
- (1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);
 - (2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
 - (3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic construction material means--

- (1) An unmanufactured construction material mined or produced in the United States; or
- (2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars) \1\
Item 1			
Foreign construction material....			
Domestic construction material...			
Item 2			
Foreign construction material....			
Domestic construction material...			

Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)

(a) The Contractor shall not acquire, for use in the performance of this contract, any supplies or services originating from sources within, or that were located in or transported from or through, countries whose products are banned from importation into the United States under regulations of the Office of Foreign Assets Control, Department of the Treasury. Those countries are Cuba, Iran, Iraq, Libya, North Korea, Sudan, the territory of Afghanistan controlled by the Taliban, and Serbia (excluding the territory of Kosovo).

(b) The Contractor shall not acquire for use in the performance of this contract any supplies or services from entities controlled by the government of Iraq.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

(End of clause)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(b) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101.to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(End of clause)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be 100 percent of the bid price.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of clause)

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS. (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand

and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.
2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.
3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.
4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.
5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].
6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. \$ _____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States \$ _____.
This draft is drawn under Irrevocable Letter of Credit No. _____.

[Beneficiary Agency]

By: _____

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.229-4 FEDERAL, STATE, AND LOCAL TAXES (NONCOMPETITIVE CONTRACT) (JAN 1991)

(a) "Contract date," as used in this clause, means the effective date of this contract and, for any modification to this contract, the effective date of the modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed tax," as used in this clause, means any new or increased Federal, State, or local tax or duty, or tax that was excluded on the contract date but whose exclusion was later revoked or amount of exemption reduced during the contract period, other than an excepted tax, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date.

"After-relieved tax," as used in this clause, means any amount of Federal, State, or local tax or duty, other than an excepted tax, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

"Excepted tax," as used in this clause, means social security or other employment taxes, net income and franchise taxes, excess profits taxes, capital stock taxes, transportation taxes, unemployment compensation taxes, and property taxes. "Excepted tax" does not include gross income taxes levied on or measured by sales or receipts from sales, property taxes assessed on completed supplies covered by this contract, or any tax assessed on the Contractor's possession of, interest in, or use of property, title to which is in the Government.

(b) Unless otherwise provided in this contract, the contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed tax, or of any tax or duty specifically excluded from the contract price by a term or condition of this contract that the Contractor is required to pay or bear, including any interest or penalty, if the Contractor states in writing that the contract price does not include any contingency for such tax and if liability for such tax, interest, or penalty was not incurred through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(d) The contract price shall be decreased by the amount of any after-relieved tax. The Government shall be entitled to interest received by the Contractor incident to a refund of taxes to the extent that such interest was earned after the Contractor was paid by the Government for such taxes. The Government shall be entitled to repayment of any penalty refunded to the Contractor to the extent that the penalty was paid by the Government.

(e) The contract price shall be decreased by the amount of any Federal, State, or local tax, other than an excepted tax, that was included in the contract price and that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to Federal, State, and local taxes and duties that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs. The contract price shall be equitably adjusted to cover the costs of action taken by the Contractor at the direction of the Contracting Officer, including any interest, penalty, and reasonable attorneys' fees.

(h) The Government shall furnish evidence appropriate to establish exemption from any Federal, State, or local tax when (1) the Contractor requests such exemption and states in writing that it applies to a tax excluded from the contract price and (2) a reasonable basis exists to sustain the exemption.

(End of clause)

52.229-5 TAXES--CONTRACTS PERFORMED IN U.S. POSSESSIONS OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE
MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region V. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (MAY 1997)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

(Name)

(Title)

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

52.232-16 PROGRESS PAYMENTS (FEB 2002) ALTERNATE I (MAR 2000)

The Government will make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts of \$2,500 or more approved by the Contracting Officer, under the following conditions:

(a) Computation of amounts. (1) Unless the Contractor requests a smaller amount, the Government will compute each progress payment as 80 percent of the Contractor's total costs incurred under this contract whether or not actually paid, plus financing payments to subcontractors (see paragraph (j) of this clause), less the sum of all previous progress payments made by the Government under this contract. The Contracting Officer will consider cost of money that would be allowable under FAR 31.205-10 as an incurred cost for progress payment purposes.

(2) The amount of financing and other payments for supplies and services purchased directly for the contract are limited to the amounts that have been paid by cash, check, or other forms of payment, or that will be paid to subcontractors --

(i) In accordance with the terms and conditions of a subcontract or invoice; and

(ii) Ordinarily prior to the submission of the Contractor's next payment request to the Government.

(3) The Government will exclude accrued costs of Contractor contributions under employee pension plans until actually paid unless--

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's total costs for progress payments until paid).

(4) The Contractor shall not include the following in total costs for progress payment purposes in subparagraph (a)(1)(i) above:

(i) Costs that are not reasonable, allocable to this contract, and consistent with sound and generally accepted accounting principles and practices.

(ii) Costs incurred by subcontractors or suppliers.

(iii) Costs ordinarily capitalized and subject to depreciation or amortization except for the properly depreciated or amortized portion of such costs.

(iv) Payments made or amounts payable to subcontractors or suppliers, except for --

(A) Completed work, including partial deliveries, to which the Contractor has acquired title; and

(B) Work under cost-reimbursement or time-and-material subcontracts to which the Contractor has acquired title.

(5) The Contractor shall not include the following in total costs for progress payment purposes in paragraph (a)(1) of this clause:

(i) the progress payments made against incomplete work (including allowable unliquidated progress payments to subcontractors) nor

(ii) the value, for progress payment purposes, of the incomplete work. Incomplete work shall be considered to be the supplies and services required by this contract, for which delivery and invoicing by the Contractor and acceptance

by the Government are incomplete.

(6) The total amount of progress payments shall not exceed 80 percent of the total contract price.

(7) If a progress payment or the unliquidated progress payments exceed the amounts permitted by subparagraphs (a)(4) or (a)(5) above, the Contractor shall repay the amount of such excess to the Government on demand.

(8) Notwithstanding any other terms of the contract, the Contractor agrees not to request progress payments in dollar amounts of less than \$2,500. The Contracting Officer may make exceptions.

(b) Liquidation. Except as provided in the Termination for Convenience of the Government clause, all progress payments shall be liquidated by deducting from any payment under this contract, other than advance or progress payments, the unliquidated progress payments, or 80 percent of the amount invoiced, whichever is less. The Contractor shall repay to the Government any amounts required by a retroactive price reduction, after computing liquidations and payments on past invoices at the reduced prices and adjusting the unliquidated progress payments accordingly. The Government reserves the right to unilaterally change from the ordinary liquidation rate to an alternate rate when deemed appropriate for proper contract financing.

(c) Reduction or suspension. The Contracting Officer may reduce or suspend progress payments, increase the rate of liquidation, or take a combination of these actions, after finding on substantial evidence any of the following conditions:

(1) The Contractor failed to comply with any material requirement of this contract (which includes paragraphs (f) and (g) below).

(2) Performance of this contract is endangered by the Contractor's (i) failure to make progress or (ii) unsatisfactory financial condition.

(3) Inventory allocated to this contract substantially exceeds reasonable requirements.

(4) The Contractor is delinquent in payment of the costs of performing this contract in the ordinary course of business.

(5) The unliquidated progress payments exceed the fair value of the work accomplished on the undelivered portion of this contract.

(6) The Contractor is realizing less profit than that reflected in the establishment of any alternate liquidation rate in paragraph (b) above, and that rate is less than the progress payment rate stated in subparagraph (a)(1) above.

(d) Title. (1) Title to the property described in this paragraph (d) shall vest in the Government. Vestiture shall be immediately upon the date of this contract, for property acquired or produced before that date. Otherwise, vestiture shall occur when the property is or should have been allocable or properly chargeable to this contract.

(2) "Property," as used in this clause, includes all of the below-described items acquired or produced by the Contractor that are or should be allocable or properly chargeable to this contract under sound and generally accepted accounting principles and practices.

(i) Parts, materials, inventories, and work in process;

(ii) Special tooling and special test equipment to which the Government is to acquire title under any other clause of this contract;

(iii) Nondurable (i.e., noncapital) tools, jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, and other similar manufacturing aids, title to which would not be obtained as special tooling under subparagraph (ii) above; and

(iv) Drawings and technical data, to the extent the Contractor or subcontractors are required to deliver them to the Government by other clauses of this contract.

(3) Although title to property is in the Government under this clause, other applicable clauses of this contract; e.g., the termination or special tooling clauses, shall determine the handling and disposition of the property.

(4) The Contractor may sell any scrap resulting from production under this contract without requesting the Contracting Officer's approval, but the proceeds shall be credited against the costs of performance.

(5) To acquire for its own use or dispose of property to which title is vested in the Government under this clause, the Contractor must obtain the Contracting Officer's advance approval of the action and the terms. The Contractor shall (i) exclude the allocable costs of the property from the costs of contract performance, and (ii) repay to the Government any amount of unliquidated progress payments allocable to the property. Repayment may be by cash or credit memorandum.

(6) When the Contractor completes all of the obligations under this contract, including liquidation of all progress payments, title shall vest in the Contractor for all property (or the proceeds thereof) not--

(i) Delivered to, and accepted by, the Government under this contract; or

(ii) Incorporated in supplies delivered to, and accepted by, the Government under this contract and to which title is vested in the Government under this clause.

(7) The terms of this contract concerning liability for Government-furnished property shall not apply to property to which the Government acquired title solely under this clause.

(e) Risk of loss. Before delivery to and acceptance by the Government, the Contractor shall bear the risk of loss for property, the title to which vests in the Government under this clause, except to the extent the Government expressly assumes the risk. The Contractor shall repay the Government an amount equal to the unliquidated progress payments that are based on costs allocable to property that is damaged, lost, stolen, or destroyed.

(f) Control of costs and property. The Contractor shall maintain an accounting system and controls adequate for the proper administration of this clause.

(g) Reports and access to records. The Contractor shall promptly furnish reports, certificates, financial statements, and other pertinent information reasonably requested by the Contracting Officer for the administration of this clause. Also, the Contractor shall give the Government reasonable opportunity to examine and verify the Contractor's books, records, and accounts.

(h) Special terms regarding default. If this contract is terminated under the Default clause, (i) the Contractor shall, on demand, repay to the Government the amount of unliquidated progress payments and (ii) title shall vest in the Contractor, on full liquidation of progress payments, for all property for which the Government elects not to require delivery under the Default clause. The Government shall be liable for no payment except as provided by the Default clause.

(i) Reservations of rights. (1) No payment or vesting of title under this clause shall (i) excuse the Contractor from performance of obligations under this contract or (ii) constitute a waiver of any of the rights or remedies of the parties under the contract.

(2) The Government's rights and remedies under this clause (i) shall not be exclusive but rather shall be in addition to any other rights and remedies provided by law or this contract and (ii) shall not be affected by delayed, partial, or omitted exercise of any right, remedy, power, or privilege, nor shall such exercise or any single exercise preclude or impair any further exercise under this clause or the exercise of any other right, power, or privilege of the Government.

(j) Financing payments to subcontractors. The financing payments to subcontractors mentioned in paragraphs (a)(1) and (a)(2) of this clause shall be all financing payments to subcontractors or divisions, if the following conditions are met:

(1) The amounts included are limited to--

(i) The unliquidated remainder of financing payments made; plus

(ii) Any unpaid subcontractor requests for financing payments.

(2) The subcontract or interdivisional order is expected to involve a minimum of approximately 6 months between the beginning of work and the first delivery; or, if the subcontractor is a small business concern, 4 months.

(3) If the financing payments are in the form of progress payments, the terms of the subcontract or interdivisional order concerning progress payments--

(i) Are substantially similar to the terms of this clause for any subcontractor that is a large business concern, or this clause with its Alternate I for any subcontractor that is a small business concern;

(ii) Are at least as favorable to the Government as the terms of this clause;

(iii) Are not more favorable to the subcontractor or division than the terms of this clause are to the Contractor;

(iv) Are in conformance with the requirements of FAR 32.504(e); and

(v) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if--

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(4) If the financing payments are in the form of performance-based payments, the terms of the subcontract or interdivisional order concerning payments--

(i) Are substantially similar to the Performance-Based Payments clause at FAR 52.232-32 and meet the criteria for, and definition of, performance-based payments in FAR Part 32;

(ii) Are in conformance with the requirements of FAR 32.504(f); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if--

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(5) If the financing payments are in the form of commercial item financing payments, the terms of the subcontract or interdivisional order concerning payments--

(i) Are constructed in accordance with FAR 32.206(c) and included in a subcontract for a commercial item purchase that meets the definition and standards for acquisition of commercial items in FAR Parts 2 and 12;

(ii) Are in conformance with the requirements of FAR 32.504(g); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if--

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(6) If financing is in the form of progress payments, the progress payment rate in the subcontract is the customary rate used by the contracting agency, depending on whether the subcontractor is or is not a small business concern.

(7) Concerning any proceeds received by the Government for property to which title has vested in the Government under the subcontract terms, the parties agree that the proceeds shall be applied to reducing any unliquidated financing payments by the Government to the Contractor under this contract.

(8) If no unliquidated financing payments to the Contractor remain, but there are unliquidated financing payments that the Contractor has made to any subcontractor, the Contractor shall be subrogated to all the rights the Government obtained through the terms required by this clause to be in any subcontract, as if all such rights had been assigned and transferred to the Contractor.

(9) To facilitate small business participation in subcontracting under this contract, the Contractor shall provide financing payments to small business concerns, in conformity with the standards for customary contract financing payments stated in FAR 32.113. The Contractor shall not consider the need for such financing payments as a handicap or adverse factor in the award of subcontracts.

(k) Limitations on Unfinalized Contract Actions. Notwithstanding any other progress payment provisions in this contract, progress payments may not exceed 80 percent of costs incurred on work accomplished under unfinalized contract actions. A "contract action" is any action resulting in a contract, as defined in Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes. This limitation shall apply to the costs incurred, as computed in accordance with paragraph (a) of this clause, and shall remain in effect until the contract action is finalized. Costs incurred which are subject to this limitation shall be segregated on Contractor progress payment requests and invoices from those costs eligible for higher progress payment rates. For purposes of progress payment liquidation, as described in paragraph (b) of this clause, progress payments for unfinalized contract actions shall be liquidated at 80 percent of the amount invoiced for work performed under the unfinalized contract action as long as the contract action remains unfinalized. The amount of unliquidated progress payments for unfinalized contract actions shall not exceed 80 percent of the maximum liability of the Government under the unfinalized contract action or such lower limit specified elsewhere in the contract. Separate limits may be specified for separate actions.

(l) Due date. The designated payment office will make progress payments on the 30 day after the designated billing office receives a proper progress payment request. In the event that the Government requires an audit or other review of a specific progress payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date. Progress payments are considered contract financing and are not subject to the interest penalty provisions of the Prompt Payment Act.

(End of clause)

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple

interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

- (1) The date fixed under this contract.
 - (2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.
 - (3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.
 - (4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.
- (c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

- (a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.
- (b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.
- (c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (FEB 2002)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

- (a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the

terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

- (1) The amount to be withheld;
- (2) The specific causes for the withholding under the terms of the subcontract; and
- (3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate payment or that the Government has otherwise overpaid on an invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

- (i) Accept payment by check or some other mutually agreeable method of payment; or
- (ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the

Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.232-5001 CONTINUING CONTRACTS (MAR 1995)--EFARS

(a) This is a continuing contract, as authorized by Section 10 of the River and Harbor Act of September 22, 1922 (33 U.S. Code 621). The payment of some portion of the contract price is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors. The responsibilities of the Government are limited by this clause notwithstanding any contrary provision of the "Payments to Contractor" clause or any other clause of this contract.

(b) The sum of \$200.00 has been reserved for this contract and is available for payments to the contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds together with funds provided by one or more non-federal project sponsors will be reserved for this contract.

(c) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not entitle the contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs (f) and (i) below. No such failure shall constitute a breach of this contract, except that this provision shall not bar a breach-of-contract action if an amount finally determined to be due as a termination allowance remains unpaid for one year due solely to a failure to reserve sufficient additional funds therefore.

(d) The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The contracting officer will promptly notify the contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.

(e) If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the contractor shall give written notice to the contracting officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

(f) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. The contractor shall be entitled to simple interest on any payment that the contracting officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97, as in effect on the first day of the delay in such payment.

(g) Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.

(h) An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.

(i) If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the contractor, by written notice delivered to the contracting officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

(j) If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the contractor because of work performed and to be performed under the

contract during the fiscal year, the Government reserves the right, after notice to the contractor, to reduce said reservation by the amount of such excess.

(End of clause)

52.233-1 DISPUTES. (DEC 1998)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

(1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or

(2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(End of clause)

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with

the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

52.236-13 ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the

Contractor shall-

- (1) Provide appropriate safety barricades, signs, and signal lights;
 - (2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and
 - (3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.
- (c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.
- (d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.
- (e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.
- (b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) In the Government-furnished facilities, equipment, materials, services, or site; or

(4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

(1) the date, circumstances, and source of the order and

(2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

52.244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)

(a) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

(b) If the Contractor is an approved mentor under the Department of Defense Pilot Mentor-Protege Program (Pub. L. 101-510, section 831 as amended), the Contractor may award subcontracts under this contract on a noncompetitive basis to its proteges.

(End of clause)

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of clause)

52.248-3 VALUE ENGINEERING-CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the

contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996) - ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is

received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(d) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) "Arising out of a contract with the DoD" means any act in connection with—

- (i) Attempting to obtain;
 - (ii) Obtaining, or
 - (iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).
- (2) “Conviction of fraud or any other felony” means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.
- (3) “Date of conviction” means the date judgment was entered against the individual.
- (b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--
- (1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;
 - (2) On the board of directors of any DoD contractor or first-tier subcontractor;
 - (3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or
 - (4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.
- (c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.
- (d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—
- (1) Employing a person under a prohibition specified in paragraph (b) of this clause; or
 - (2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.
- (e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—
- (1) Suspension or debarment;
 - (2) Cancellation of the contract at no cost to the Government; or
 - (3) Termination of the contract for default.
- (f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—
- (1) The person involved;
 - (2) The nature of the conviction and resultant sentence or punishment imposed;
 - (3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

(a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

(End of clause)

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

(End of clause)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employee has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2.1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (APR 2002)

(a) Definitions. As used in this clause--

(1) Component means any item supplied to the Government as part of an end product or of another component.

(2) End product means supplies delivered under a line item of this contract.

(b) The Contractor shall deliver under this contract only such of the following items, either as end products or components, that have been grown, reprocessed, reused, or produced in the United States, its possessions, or Puerto Rico:

(1) Food.

(2) Clothing.

(3) Tents, tarpaulins, or covers.

(4) Cotton and other natural fiber products.

(5) Woven silk or woven silk blends.

(6) Spun silk yarn for cartridge cloth.

(7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics.

(8) Canvas products.

(9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles).

(10) Any item of individual equipment (Federal Supply Class 8465) manufactured from or containing fibers, yarns, fabrics, or materials listed in this paragraph (b).

(c) This clause does not apply--

(1) To items listed in section 25.104(a) of the Federal Acquisition Regulation (FAR), or other items for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To end products incidentally incorporating cotton, other natural fibers, or wool, for which the estimated value of the cotton, other natural fibers, or wool--

(i) Is not more than 10 percent of the total price of the end product; and (ii) Does not exceed the simplified acquisition threshold in FAR part 2;

(3) To foods that have been manufactured or processed in the United States, its possessions, or Puerto Rico, regardless of where the foods (and any component if applicable) were grown or produced;

(4) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(5) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--

(i) The fabric is to be used as a component of an end product that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--

(A) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);

(B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;

(C) Upholstered seats (whether for household, office, or other use); and

(D) Parachutes (Federal Supply Class 1670); or

(ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.

(End of clause)

(a) Definitions. As used in this clause--

(1) "Foreign person" means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).

(2) "United States person" is defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concerns, as determined under regulations of the President.

(b) Certification. By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.

(End of clause)

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

(End of clause)

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

(i) Material;

(ii) Labor;

(iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

252.236-7001 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

(1) Check all drawings furnished immediately upon receipt;

(2) Compare all drawings and verify the figures before laying out the work;

(3) Promptly notify the Contracting Officer of any discrepancies;

(4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and

(5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

(1) Large-scale drawings shall govern small-scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

M-ES – 7/G-1 PROJECT LOCATION, VICINITY MAP AND INDEX OF DRAWINGS

(End of clause)

252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES. (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for --

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

252.242-7000 POSTAWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any postaward conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

(End of clause)

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL	_____	_____

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(End of clause)

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

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General Decision Number IL020007

General Decision Number IL020007

Superseded General Decision No. IL010007

State: **Illinois**

Construction Type:

BUILDING

RESIDENTIAL

County(ies):

MADISON ST CLAIR

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) & RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	03/01/2002
1	03/15/2002
2	04/19/2002
3	04/26/2002
4	07/05/2002
5	08/09/2002

COUNTY(ies):

MADISON ST CLAIR

ASBE0999C 01/01/1994

	Rates	Fringes
ASBESTOS WORKERS	18.99	2.76

BOIL0363A 01/01/2001

	Rates	Fringes
BOILERMAKERS	24.20	11.33

BRIL0008G 08/01/2001

	Rates	Fringes
BRICKLAYERS, STONE MASON, MARBLE MASON, TILE LAYER, POINTER, CLEANER, CAULKER	25.07	7.70

CARP0295D 08/01/2000

	Rates	Fringes
MADISON COUNTY: CARPENTERS: BUILDING CONSTRUCTION: CARPENTERS, MILLWRIGHTS, PILEDRIERS & LATHERS, SOFT FLOOR LAYERS	23.26	8.98

CARP0500B 08/01/2000

	Rates	Fringes
ST. CLAIR COUNTY BUILDING CARPENTERS, MILLWRIGHTS, PILEDRIERS & LATHERS, SOFT FLOOR LAYERS	23.26	8.98

* CARP1111D 08/01/2002

	Rates	Fringes
RESIDENTIAL CONSTRUCTION:		
MADISON COUNTY:		
CARPENTERS		
Projects of housing units not to exceed three levels (including the level below ground if these are living quarters). that are 2 or less buildings. Housing units shall include single dwellings, duplexes, row houses, garden houses, and four family apartment buildings and condominiums.		
CARPENTERS	15.93	9.98
Projects of 4 story housing units, buildings constructed of steel and concrete construction, apartment complexes(3 buildings or more), apartment buildings that have commercial stores, offices, or professional quarters in conjunction with commercial ventures such as nursing homes motels, etc.		
CARPENTERS	23.26	8.98

* CARP1111E 08/01/2002

	Rates	Fringes
RESIDENTIAL CONSTRUCTION:		
ST. CLAIR COUNTY:		
CARPENTERS		
Projects of housing units not to exceed three levels (including the level below ground if these are living quarters). that are 2 buildings or less. Housing units shall include single dwellings, duplexes, row houses, garden houses, and eight family apartment buildings and condominiums.		
CARPENTERS	23.06	9.98
Projects of 4 story housing units, buildings constructed of steel and concrete construction, apartment complexes(3 buildings or more), apartment buildings that have commercial stores, offices, or professional quarters in conjunction with commercial ventures such as nursing homes motels, etc.		
CARPENTERS	23.26	8.98

ELEC0309E 08/30/2000

	Rates	Fringes
MADISON (EXCLUDES ALTON & VIC.) & ST. CLAIR COUNTIES		
ELECTRICIANS	27.01	36%

ELEC0649C 09/01/2001

	Rates	Fringes
RESIDENTIAL CONSTRUCTION:		
MADISON (ALTON-GODFREY, ROXANA, & HARTFORD AREA) COUNTY		
ELECTRICIANS	16.55	4.85
BUILDING CONSTRUCTION:		
MADISON (ALTON & VIE TWPS):		
ELECTRICIANS	23.56	7.89+3.3%

ELEV0003B 07/01/2000

	Rates	Fringes
MADISON & ST. CLAIR COUNTIES		
ELEVATOR CONSTRUCTORS:		
Elevator mechanics	27.765	6.935+a

FOOTNOTE:

a-Employer contributes 8% of basic hourly rate for
5 years service and 6% basic hourly rate for
6 months to 5 years service, as Vacation Pay
Credit.

PAID HOLIDAYS: New Year's Day, Memorial Day,
Independence Day, Labor Day, Thanksgiving Day
Friday after Thanksgiving Day, and Christmas Day.

* ENGI0520C 08/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS		
GROUP 1:	24.30	13.80
GROUP 2:	18.64	13.80
GROUP 3:	18.75	13.80
GROUP 4:	18.42	13.80
GROUP 5:	24.85	13.80
GROUP 6:	25.15	13.80
GROUP 7:	25.43	13.80

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes; Draglines; Shovels; Skimmer Scoops; Clamshells or Derrick Bosts; Pilderivers; Crane-Type Backhoes; Asphalt Plant Operator; Concrete Plant Operator; Dredges; Asphalt Spreading Machines; Locomotives; Cableways or Tower Machines; Hoists; Hydraulic Backhoes; Ditching Machines or Backfiller; Cherry pickers; Overhead Crane; Roller; Concrete Paver; Concrete Breakers & Pumps; Bulk Cement Plants; Cement Pumps; Derrick Type Drills; Boat Operators; Motor Graders or Pushcats; Scoops or Tournapulls; Bulldozers; Endloaders or Forklifts; Power Blade or Elevating Graders; Winch Cats; Boom or Winch Trucks or Boom Tractors, Pipewrapping or Painting Machines; Drills (other than derrick type); Mud Jacks; Well Drilling Machines; Mixers; Conveyors (two); Air Compressors Two; Water Pumps Regardless of Size; Welding Machines Two; Siphons or Jets Two; Winch Heads or Apparatus Two; Light Plants Two; Tractors Regardless of size Straight (tractor only); Firemen on Stationary Boilers; Automatic Elevators; Form Grading Machines; Finishing Machines; Power Sub-Grader or Ribbon Machine; Longitudinal Floats; Distribution Operator on Trucks; Winch Heads or Apparatuses (1); Excavators; Mobile Track air and Heater (two to five); Heavy Equipment Greaser and all other operators not listed below.

GROUP 2: Air Compressor One; Water Pump Regardless of size one; Welding Machine One; 1-Bag Mixer one; Conveyor One; Siphon or Jet; Light Plant One; Heater One; Immobile Track Air One.

GROUP 3: Firemen on whirlies and Asphalt Spreader Oilers; Heavy Equipment Oilers; Truck Cranes; Monigans; Large (over 65 ton rate capacity); Concrete Plant Oiler and Black Top Plant Oiler.

GROUP 4: Oilers

GROUP 5: Master Mechanic; Operators on Equipment with Booms, Including Jibs, One Hundred Feet and Over; And Less than 150 Feet.

GROUP 6: Operators on Equipment with Booms, Including Jibs, 150 Feet and over, and Less Than 200 Feet.

GROUP 7: Operators on Equipment with booms, Including Jibs, 200 Feet and over; Tower Cranes and Whirley Cranes.

IRON0392D 08/01/2001

	Rates	Fringes
IRONWORKER	22.77	11.73

* LABO0044B 08/01/2002

	Rates	Fringes
MADISON (COLLINSVILLE) COUNTY		
LABORER		
GROUP 1	19.75	11.00

GROUP 2	20.00	11.00
GROUP 3	20.15	11.00
GROUP 4	21.175	11.00

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0100E 08/01/2001

	Rates	Fringes
ST CLAIR (East St Louis & Vicinity) COUNTY		
LABORERS:		
GROUP 1	21.50	8.70
GROUP 2	21.75	8.70
GROUP 3	21.76	8.70
GROUP 4	22.00	8.70
GROUP 5	22.50	8.70
GROUP 6	23.025	8.70

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers

GROUP 2 - Gunnite or sandblasting work, working with creosote; burning and or cutting with torch; work in cased wells; working with mastic or other coal tar derivatives doping and wrapping of pipe.

GROUP 3 - Work on bottom of sewer trenches.

GROUP 4 - Plasterer Tenders

GROUP 5 - Work on smoke stacks.

GROUP 6 - Dynamite men.

* LABO0179C 08/01/2002

	Rates	Fringes
MADISON (EDWARDSVILLE, LIVINGSTON, AND MARINE) COUNTY:		
LABORER		
GROUP 1	20.90	9.85
GROUP 2	21.15	9.85
GROUP 3	21.40	9.85
GROUP 4	22.425	9.85

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

* LABO0197B 08/01/2002

	Rates	Fringes
ST. CLAIR COUNTY (BELLEVILLE)		
HOD CARRIERS	25.00	6.25

LABO0218C 08/01/1997

	Rates	Fringes
MADISON (ALTON) COUNTY		
LABORER		
GROUP 1	19.20	7.20
GROUP 2	19.45	7.20
GROUP 3	19.70	7.20
GROUP 4	20.725	7.20

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

* LABO0338C 08/01/2002

	Rates	Fringes
MADISON (Wood River) COUNTY		
LABORER		
GROUP 1	21.25	9.50
GROUP 2	21.50	9.50
GROUP 3	21.75	9.50
GROUP 4	22.775	9.50

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0382A 08/01/1997

	Rates	Fringes
MADISON (TROY & VICINITY) COUNTY		
LABORER		
GROUP 1	20.25	6.55
GROUP 2	20.50	6.55
GROUP 3	20.75	6.55

GROUP 4 21.10 6.55

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Working on Bottom of Sewer Trenches; using burning or cutting torches; working with mastic; working with creosote or other harmful material; using chain saws; high work of 25 + feet.

GROUP 3 - Brick Mason Tenders and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0397A 08/01/2001

Rates Fringes
MADISON (GRANITE CITY, MADISON, VENICE, NAMEOKI, & MITCHELL)
COUNTY

LABORERS

Group 1	21.50	8.70
Group 2	21.775	8.70
Group 3	22.00	8.70
Group 4	22.025	8.70
Group 5	22.825	8.70

LABORER DEFINITIONS:

GROUP 1-General Laborers

GROUP 2-Cutting, burning and welding.

GROUP 3-Brick Mason Tenders and Plasterer Tenders

GROUP 4-Oxygen Lancing

GROUP 5-Dynamite men.

* LABO0454A 08/01/2002

Rates Fringes
ST. CLAIR (E. ST. LOUIS & VICINITY) COUNTY:
HOD CARRIERS 26.55 4.70

* LABO0459B 08/01/2002

Rates Fringes
ST. CLAIR (BELLEVILLE, FREEBURG, NEW ATHENS & VICINITY)&
WASHINGTON (NASHVILLE & ASHLEY) COUNTIES:
LABORER

GROUP 1	21.10	9.65
GROUP 2	21.35	9.65
GROUP 3	21.60	9.65
GROUP 4	22.625	9.65

LABORER CLASSIFICATION

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); gunnite or sandblasting work; Working with creosote Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches, High time (20 feet or over) Operator of motor buggies; work on cased wells; Working with mastic or other coal tar derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite Men.

* LABO0474C 08/01/2002

Rates Fringes
MADISON (GLEN CARBON) COUNTY:
LABORER

GROUP 1	20.10	10.65
GROUP 2	20.35	10.65
GROUP 3	20.60	10.65
GROUP 4	21.625	10.65

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0670C 08/01/2001

Rates Fringes
ST CLAIR (O'FALLON, SCOTT AFB, SHILOH, LEBANON & VICINITY)
COUNTY

LABORERS:

GROUP 1	21.70	8.50
GROUP 2	21.95	8.50
GROUP 3	22.20	8.50
GROUP 4	22.55	8.50

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers

GROUP 2: Work on Bottom of Sewer Trenches; using burning or cutting torches; working with mastic; working with creosote or other harmful material; using chain saws; high work of 25+ feet.

GROUP 3: Brick Mason Tenders and Plasterer Tenders.

GROUP 4: Dynamite and Powder Men.

* LABO0674B 08/01/2002

Rates Fringes
MADISON (St. Jacob) COUNTY:
LABORER

GROUP 1	29.45	1.30
GROUP 2	29.70	1.30
GROUP 3	29.95	1.30
GROUP 4	30.975	1.30

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

* LABO0680C 08/01/2002

Rates Fringes
MADISON (Highland) COUNTY:
LABORER

GROUP 1	20.50	10.25
GROUP 2	20.75	10.25
GROUP 3	21.00	10.25
GROUP 4	22.025	10.25

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0742C 08/01/2001

	Rates	Fringes
ST. CLAIR (MUSCOUTAH) COUNTY		
LABORER		
GROUP 1	20.45	9.75
GROUP 2	20.70	9.75
GROUP 3	20.95	9.75
GROUP 4	21.05	9.75

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Working on Bottom of Sewer Trenches; using burning or cutting torches; working with mastic; working with creosote or other harmful material; using chain saws, high work of 25+ feet.

GROUP 3 - Brick Mason Tenders and Plasterer Tenders

GROUP 4 - Dynamite and Powder Men.

PAIN0058E 05/01/2000

	Rates	Fringes
PAINTERS		
COMMERCIAL:		
BRUSH	21.82	6.60
SPRAYING BLASTING		
STEAM CLEANING	23.82	6.60
TAPER	22.07	6.60
RESIDENTIAL:		
BRUSH	20.69	6.60

PAIN0513F 11/01/2001

	Rates	Fringes
GLAZIERS	26.16	15.76

* PLAS0090C 08/01/2002

	Rates	Fringes
CEMENT MASON	24.10	10.90
PLASTERERS	23.55	11.05
TERRAZZO WORKERS	17.55	
TILE SETTERS' FINISHERS	11.70	1.605

PLUM0101B 07/01/2001

	Rates	Fringes
ST. CLAIR (BELLEVILLE, FAYETTEVILLE, FREESBURG, LEBANON,		

LENZBERG, MASCOUTAH, MARISSA, MILLSTADT, NEW ATHENS, SCOTT AFB,
SHILOH, SMITHON, ST. LIBORY, SUMMERFIELD, & SWANSEE) COUNTY:
PLUMBERS & PIPEFITTERS 27.90 6.55

PLUM0360B 07/01/2002

	Rates	Fringes
MADISON (GRANITE CITY & SOUTHERN 1/2 OF COUNTY) & ST. CLAIR (E. ST. LOUIS & VIC.) COUNTIES		
PLUMBERS	27.95	7.85

PLUM0439A 01/01/2002

	Rates	Fringes
MADISON (Grant City and Southern 1/2 of County) and St Clair (East St. Louis and Vic) Counties		
STEAMFITTERS	25.54	10.30

PLUM0553B 07/01/2001

	Rates	Fringes
MADISON (North of East - West which is one mile North of South line of Chouteau, Edwardsville, Oak, Marine, and Saline Townships) COUNTY		
PLUMBERS & PIPEFITTERS	28.50	6.75 + A
FOOTNOTES: A. 4 HOURS PD. FOR CHRISTMAS EVE IF HOLIDAY FALLS ON MONDAY THRU FRIDAY.		

ROOF0002E 03/01/2000

	Rates	Fringes
ROOFERS:		
ROOFER	22.30	6.45
KETTLEMAN	20.10	6.45

SFIL0669A 04/01/2002

	Rates	Fringes
SPRINKLER FITTERS	30.54	6.05

SHEE0268B 07/01/2002

	Rates	Fringes
SHEET METAL WORKERS(Residential-defined as any single family dwelling or multiple family housing unit where each individual family apartment is individually conditioned by a separate and independent unit or system. Multiple family units limited to three levels of tenants,)	14.14	5.72
SHEET METAL WORKERS (All other work)	26.04	10.35

TEAM0001I 05/01/2001

	Rates	Fringes
TRUCK DRIVERS:		
GROUP 1	23.19	4.36+A
GROUP 2	23.59	4.36+A
GROUP 3	23.79	4.36+A
GROUP 4	24.04	4.36+A
GROUP 5	24.79	4.36+A

FOOTNOTE FOR TRUCK DRIVERS:

A: \$85.00 per week

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Drivers on 2 Axle Trucks Hauling Less Than 9 Tons. Air Compressor and Welding Machines & Brooms, Including Those Pulled by Separate Units, Warehousemen, Greasers & Tiremen, Pickup

Trucks When Hauling Material, Tools, or Men to and from & on the Job Site, & Fork Lifts up to 6,000 LB. Capacity.

GROUP 2: Two or Three Axle Trucks Hauling more than 9 tons But Hauling less than 16 Ton, A-Frame Winch Trucks, Hydrolift Trucks, or Similar Equipment When Used For Transportation Purposes. Fork Lifts over 6,000 LB. Capacity, Winch Trucks, & Four Axle Combination Units.

GROUP 3: Two, Three or Four Axle Trucks Hauling 16 tons or more, Drivers on Water Pulls. Five Axle or more Combination Units.

GROUP 4: Lowboy & Oil Distributors.

GROUP 5: Drivers who require special protective clothing while employed on hazardous waste work.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment

data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION



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00800.11

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SECTION 00800 - SPECIAL CLAUSES

1. REFERENCE DRAWINGS.

a. One set of the reference drawings listed on Drawing No. M-ES-7/G-1 which cover details of the existing structure, will be included in each set of the contract drawings furnished the Contractor without charge, in accordance with Contract Clause DFARS 252.236-7001. Drawings showing additional details are available for examination at the Dept. of the Army, St. Louis District, Corps of Engineers, St. Louis, Missouri. Additional prints of reference drawings will be furnished the Contractor on request at the cost of reproduction.

b. The stationing and dimensions shown on the contract and reference drawings for the existing structure have been taken from the original contract drawings and the shop drawings for the original construction. The Contractor shall verify all the above stationing and dimensions and shall be responsible for making the new material and work fit the existing conditions.

2. PAY REQUESTS. Pay requests authorized in the Contract Clause entitled "Payments Under Fixed-Price Construction Contracts", will be paid pursuant to the clause entitled "Prompt Payment for Construction Contracts". Pay requests shall be submitted on ENG Form 93 and 93a, "Payment Estimate-Contract Performance" and "Continuation", respectively. All information and substantiation required by the identified contract clauses shall be submitted with the ENG Form 93, and the required certification shall be included on the last page of the ENG Form 93a, signed by an authorized official of the Contractor and dated when signed. The designated billing office is the Office of the Area Engineer.

3. PHYSICAL DATA (APR 1984). FAR 52.236-4. Data and information furnished or referred to below is furnished for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

a. Physical Conditions. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and borings. Information regarding these borings and additional information regarding shear, and other test results are available for inspection upon 48 hours notice at the Dept. of the Army, St. Louis District, Corps of Engineers, 1222 Spruce Street, St. Louis, Missouri.

b. Weather Conditions. Information with respect to temperatures and precipitation may be obtained from the National Weather Service.

c. Transportation Facilities. Railroads and highways serve the general area of the work.

4. RIGHT-OF-WAY.

a. Right-of-way for construction purposes will be furnished by the Government without cost to the Contractor. Where right-of-way for access to a work site is not available over existing public roads, access through

private lands as shown on the contract drawings will be furnished by the Government without cost to the Contractor. If the right-of-way furnished for access is used, the Contractor will be required at its own expense, to do all work necessary to make such right-of-way suitable for traveling to and from the work site without interrupting the existing drainage. Upon completion of the contract work, any such access roadway and right-of-way furnished by the Government shall be left in a condition satisfactory to the Contracting Officer.

b. The Contractor shall procure without expense to the Government all additional lands, access roads, or right-of-way necessary for its use in the performance of the work. Any agreements or permits with levee boards, counties, or political subdivisions for moving material and equipment will also be the responsibility of the Contractor. Any delays to the Contractor resulting from delays in procuring such additional lands, access roads, right-of-way, or permits for moving material and equipment for its own use will not be made a basis of any claim for increases in the cost of performance of the work. The Contractor shall make its own investigations to determine the conditions, restrictions, and difficulties which may be encountered in the transportation of material and equipment to the work sites shown on the drawings.

5. PUBLIC UTILITIES AND PRIVATE IMPROVEMENTS.

a. Unless otherwise specified, shown on the drawings, or stated in writing by the Contracting Officer, the Contractor shall not move or disturb any public utilities or private improvements. Such removals, alterations, and/or relocations, where necessary, will be made by others. The locations shown on the drawings for underground utilities are approximate only. The exact locations of such utilities shall be determined by the Contractor in the field prior to commencing construction operations in their vicinity.

b. The attention of the Contractor is directed to the possibility that public utilities or private improvements may be encountered within the construction limits, some of which may be buried, and the existence of which is presently not known. Should any such utilities or improvements be encountered, the Contractor shall immediately notify the Contracting Officer so that a determination may be made as to whether they shall be removed, relocated, or altered. After such determination is made, the Contractor shall, if so directed by the Contracting Officer, remove, relocate, or alter them as required and an equitable adjustment will be made. In the event the Contracting Officer arranges for such removals, alterations, or relocations to be performed by others, the Contractor shall cooperate with such others during the latters' removal, alteration, or relocation operations.

6. DAMAGE TO WORK. The responsibility for damage to any part of the permanent work shall be as set forth in the Contract Clause entitled "Permits and Responsibilities." However, if in the judgment of the Contracting Officer any part of the permanent work performed by the Contractor is damaged by flood or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor shall make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If in the opinion of the Contracting Officer there are no contract unit or lump sum prices applicable to any part of such

work, an equitable adjustment pursuant to the Contract Clause entitled, "Changes," of the contract will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment, and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

7 AND 8. NOT USED.

9. PARTIAL PAYMENT. At the discretion of the Contracting Officer, partial payment will be made for equipment delivered and stored on site or off site providing such storage is in accordance with the provisions of these specifications and the Contractor furnishes satisfactory evidence that title to such equipment has been acquired and that it will be utilized on the work covered by these specifications. Partial payment is defined as the invoice amount plus shipping costs. If the equipment is stored off site, the Government shall have the right to inspect the equipment.

10. CERTIFICATES OF COMPLIANCE. Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in 3 copies. Each certificate shall include the signature and title of an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from responsibility for furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

11. PURCHASE ORDERS. Two copies of all purchase orders for other than stock materials showing the firm names and addresses and list of material shall be furnished to the Contracting Officer or an authorized representative as soon as issued.

12. SAFETY AND HEALTH REQUIREMENTS MANUAL EM 385-1-1. The Safety and Health Requirements Manual EM 385-1-1 forms a part of these specifications. EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil> (at the HQ homepage, select Safety and Occupational Health). The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation. EM 385-1-1 is provided on the CD-ROM and the St. Louis District web site for each solicitation, however the Contractor shall be responsible for obtaining any changes to the manual which are available on the above web site.

13. ACCIDENT INVESTIGATIONS AND REPORTING. Refer to EM 385-1-1, Paragraph 01.D. Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported to the Contracting Officer or an authorized representative within one working day after the accident occurs. The accident Investigation report shall be made on ENG Form 3394.

14. ACCIDENT PREVENTION PROGRAM. Refer to Contract Clause FAR 52.236-13 entitled, "Accident Prevention". Within 15 days after receipt of Notice of Award of the contract, and at least 7 days prior to the prework conference,

the original and one copy of the Accident Prevention Program shall be submitted to the Contracting Officer for review. The program shall be prepared in the following format:

a. An executed MVS Form 385-33, Administrative Plan.

b. An executed MVS Form 385-359-R, Hazard Analysis.

c. A copy of company policy statement of accident prevention and any other guidance statements normally provided new employees. Each company employee shall be required to sign the company policy statement of accident prevention to verify that all employees have been informed of the safety program, and such signed statements shall be maintained at the project site.

d. When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be included on MVS Form 385-22, Fuel Oil Transfer (refer to 33 CFR 156).

The Contractor shall not commence physical work at the site until the program has been reviewed and found acceptable by the Contracting Officer, or an authorized representative. At the Contracting Officer's discretion, the Contractor may submit its Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also refer to Section 1 of EM 385-1-1.

15. DAILY INSPECTIONS. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer.

Reports of daily inspections shall be maintained at the job site. The reports shall be records of the daily inspections and resulting actions. Each report shall include, as a minimum, the following:

a. Phase(s) of construction underway during the inspection.

b. Locations of areas inspections were made.

c. Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

16. ENVIRONMENTAL LITIGATION.

(a) If the performance of all or any part of the work is ordered by a court of competent jurisdiction to be suspended, delayed, or interrupted as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the Contract Clause entitled "Suspension of Work".

(b) The term "environmental litigation", as used herein, means a

lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

17. TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER.

a. This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the Contract Clause entitled, "Default (Fixed-Price Construction)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(4)	(4)	(4)	(4)	(4)	(6)	(9)	(8)	(3)	(3)	(4)	(4)

c. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor shall record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph b, above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the Contract Clause entitled "Default (Fixed Price Construction)".

18. SUBCONTRACTS. In accordance with the Contract Clause entitled "Subcontracts", the Contractor shall, within seven days after the award of any subcontract by the Contractor or a Subcontractor, deliver to the Contracting Officer two copies of a completed Standard Form 1413. Both copies must contain the original signatures of both parties.

19. REQUIRED INSURANCE - WORK ON A NON-GOVERNMENT INSTALLATION.

a. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract at least the kinds and minimum amounts of insurance required in the following schedule:

(1) Workmen's Compensation. Amounts required by applicable jurisdictional statutes.

(2) Employer's Liability Insurance. \$100,000

(3) Comprehensive General Liability Insurance.

Bodily Injury - \$500,000 per occurrence

(4) Comprehensive Automobile Insurance.

Bodily Injury - \$200,000 each person
\$500,000 each accident
Property Damage - \$ 20,000 each accident

b. Within 15 days after receipt of Notice of Award and before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

c. The Contractor shall insert the substance of this clause, including this paragraph c, in subcontracts under this contract and shall require subcontractors to provide and maintain the insurance required in paragraph a above. The Contractor shall maintain a copy of all subcontractor's proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

d. Statements of insurance should be submitted to the following address:

Department of the Army
St. Louis District, Corps of Engineers
Central Area Office; CEMVS-CO-CA
301 Riverlands Way
West Alton, Missouri 63386

20. PROTECTION OF MATERIAL AND WORK. The Contractor shall at all times protect and preserve all materials, supplies, and equipment of every description (including property which may be Government-furnished or owned) and all work performed. All reasonable requests of the Contracting Officer to enclose or specially protect such property shall be complied with. If, as determined by the Contracting Officer, material, equipment, supplies, and work performed are not adequately protected by the Contractor, such property may be protected by the Government and the cost thereof may be charged to the Contractor or deducted from any payments due to the Contractor.

21. CONTAMINATION OF WATER. In addition to the requirements set forth in 01130-3.3, Protection of Water Resources, the Contractor shall take positive protective measures to prevent spillage of potential pollutant materials such as fuel, emulsion materials, chemicals etc., from storage containers or equipment, into lakes or tributary waters. Such positive protective measures may include, but not limited to, the following:

(1) A berm enclosure of sufficient capacity to contain such materials.

(2) Security measures to prevent acts of vandalism which could result in spillage of such materials (fences, guards, etc.).

(3) Storage of such materials in an area where the terrain would preclude leakage into lake or tributary waters.

(4) Utilization of secure Government storage areas if the Contracting Officer indicates such space is available. No storage past immediate needs (2 days) without the consent of the Contracting Officer.

The Contractor shall submit its proposals for implementing the above provisions in accordance with 01130-1.5, Environmental Protection Plan.

22. COMMERCIAL WARRANTY. The Contractor agrees that the standard commercial equipment furnished under this contract shall be covered by the most favorable commercial warranties the manufacturer gives to any customer for such equipment, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the Government by any other clause of this contract. The Contractor shall furnish two copies of the warranties to the Contracting Officer.

23. ORDER AND COORDINATION OF WORK. The Contractor may start and complete the work in such order and sequence as desired subject to compliance with the following paragraphs:

1. The Contractor shall coordinate with the Metro East Sanitary District before beginning work at any of the pump stations. Work by the Contractor shall in no way interfere with or restrict operations at any of the pump stations. The contact point for the Metro East Sanitary District is -

Mr. Gerry Duff Superintendent 618/274-4800

Mr. Steve Hayden Pump Station Foreman 618/781-7696

2. The Contractor shall not begin work on removing the shutter gates at the East St. Louis Pump Station until the new flexible flap valves and all appurtenances have been delivered to the site.
3. The Contractor shall remove one of the shutter gates at the East St. Louis Pump Station and shall complete installation of the new flexible flap valve before beginning work on the next shutter gate.
4. The Contractor shall remove the steel bulkheads at the top of the East St. Louis Pump Station discharge chamber prior to beginning any work in the discharge chamber. These bulkheads shall be stored in a fenced in area just to the south of the pump station. When all work in the

discharge chamber is complete the Contractor shall return the steel bulkheads to their original positions.

5. The Contractor shall remove, rehabilitate, reinstall and test the deep well pump in the northeast corner (adjacent to the forebay access door) of the North Pump Station before proceeding with the other deep well pump.
6. The Contractor shall coordinate the use of any mobile cranes on the grounds of North Pump Station with the Metro East Sanitary District. Any modifications to the fences surrounding the pump station shall be temporary and the fences restored to their original condition following the completion of construction.

24. AS-BUILT DRAWINGS.

a. "As-Built" Contract Drawings. The Contractor shall maintain a separate set of full-size contract drawings, marked up in red, to indicate as-built conditions. Each as-built contract drawing shall include the Contract Number (DACW43-XX-C-XXXX) associated with the contract. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. Upon completion of the work, two (2) sets of the marked-up drawings shall be furnished to the Contracting Officer prior to acceptance of the work. The Government will withhold two percent of the total bid price of the items for which as-built contract drawings have not been submitted.

b. "As-Built" Shop Drawings. Upon completion of items of work, the Contractor shall revise the shop drawings to show "as-built" conditions. The notation "Revised to show 'as-built' conditions" shall be placed in red in the lower right corner of each drawing along with the initials of a responsible company representative. Each as-built shop drawing or catalog cut shall be identified by the Contract Number (DACW43-XX-C-XXXX) associated with the contract, and corresponding transmittal number from ENG Form 4025. "As-built" shop drawings of each Contractor-prepared construction drawing should be prepared as soon as possible after the construction detailed on a given drawing has been completed. After the "as-built" shop drawings have been prepared as described above and within 15 days after the contract completion date, the Contractor shall submit four (4) complete sets of as-built shop drawings, including catalog cuts, to the Contracting Officer. The Government will withhold two percent of the total bid price of the item for which as-built shop drawings have not been submitted.

25 THRU 33. NOT USED.

34. PARTNERING. In order to most effectively accomplish this contract, the Government is willing to form a cohesive partnership with the Contractor. This partnership would strive to draw on the strengths of each organization in an effort to achieve a quality project done right the first time, within budget, and on schedule. This partnership would be bilateral in make-up and partnership will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by all parties and will be shared equally with no change in contract price.

35. SECTION 8(a) DIRECT AWARD. DFARS 252.219-7009

(a) This contract is issued as a direct award between the contracting office and the 8(a) Contractor pursuant to the Memorandum of Understanding dated May 6, 1998, between the Small Business Administration (SBA) and the Department of Defense. Accordingly, the SBA is not a party to this contract. SBA does retain responsibility for 8(a) certification, 8(a) eligibility determinations and related issues, and for providing counseling and assistance to the 8(a) Contractor under the 8(a) Program. The cognizant SBA office is:

US Small Business Administration
St. Louis District Office
815 Olive Street Room 242
St. Louis, MO 63101-1569

(b) The contracting office is responsible for administering the contract and for taking any action on behalf of the Government under the terms and conditions of the contract; provided that the contracting office shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under the contract. The contracting office also shall coordinate with the SBA prior to processing any novation agreement. The contracting office may assign contract administration functions to a contract administration office.

(c) The Contractor agrees that--

(1) It will notify the Contracting Officer, simultaneous with its notification to the SBA (as required by SBA's 8(a) regulations at 13 CFR 124.308), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish ownership or control of the concern. Consistent with Section 407 of Pub. L. 100-656, transfer of ownership or control shall result in termination of the contract for convenience, unless the SBA waives the requirement for termination prior to the actual relinquishing of ownership and control; and

(2) It will not subcontract the performance of any of the requirements of this contract without the prior written approval of the SBA and the Contracting Officer.

36. CHANGES IN PERFORMANCE OF WORK AS NEGOTIATED. The Contractor shall beforehand notify the Contracting Officer, in writing, of any change or substitution in utilization of a subcontractor, supplier, etc., from that which was relied on by the Government during the cost and pricing negotiation. Such notification shall include: 1) the name of the new subcontractor, supplier, etc.; 2) the work to be performed or material supplied; 3) the reason for the substitution and; 4) whether the Contractor's costs will remain the same, increase, or decrease as a result of the change. This notification shall also be applicable if the change results in work to be performed or material or equipment to be supplied by the Contractor.

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1. Contractor		2. Contract Name & No.		3. Date	
4. Project Superintendent		5. Shift/day	5a. Hours/shift		5b. Maximum employees/shift
6a. TRAINING - List subjects to be discussed with employees in safety indoctrination.					
6b. TRAINING - List mandatory training and certifications which are applicable to this project (e.g., explosive actuated tools, confined space entry, crane operator, diver, vehicle operator, etc.)					
7. Responsibility & Authority - Who is responsible for safety?					
Project:		Corporate:		Line of Authority?	
8. Who will conduct safety inspection?		8a. How		8b. When	
9a. Is safety & health policy attached?		9b. Is safety program attached?		9c. Day & hour weekly safety meeting	
10. How will subcontractor & supplies be controlled?		11. What are their safety responsibilities?			
12. Who will report accidents, exposure data?					
13. MEDICAL SUPPORT. Outline on-site medical support and off-site medical arrangements.					

14. Outline procedures for conducting hazard assessments & written certification of PPE	Who?	When?	How?

15. Names of first aid attendants having certificates	Type of certificate & expiration date	Names of USCG licensed boat operators. Type license & expiration date.

On a separate sheet submit your proposed layout of temporary buildings and facilities (including subcontractors) and traffic patterns including access roads, haul roads, R.R.s. utilities, etc.

The _____ will pursue a positive program of training,, inspections
(Company)
and hazard control throughout the term of this contract. Mr./Ms. _____ has
the responsibility and authority for enforcing them.

Contractor's Signature

Date

C.O. or C.O.R. Signature

Date

ACCIDENT PREVENTION PROGRAM HAZARD ANALYSIS			
1. Contract No.	2. Project	3. Facility	
4. Date	5. Location	6. Estimated Start Date	
7. PRINCIPAL STEPS	8. POTENTIAL HAZARDS	9. RECOMMENDED CONTROLS	
10. EQUIPMENT TO BE USED	11. INSPECTION REQUIREMENTS	12. TRAINING REQUIREMENTS	
14. Report discussed with contractor/superintendent on _____ _____ Area/Resident Engineer (Signature)		15. Contracting Officer (Signature & Date) or Contracting Officer Representative	
MVS 385-359-R MAY99 Proponent: CEMVS-SO			

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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 GENERAL.

1.1 DISCHARGE CHAMBER ROOF. Payment for repairs to the discharge chamber roof slab joint at North Pump Station will be made at the contract lump sum price for "Discharge Chamber Roof - North Pump Station", which price and payment shall constitute full compensation for all costs associated with mobilization and demobilization and the repairs as specified in the applicable parts of SECTION 05500 - DISCHARGE CHAMBER ROOF SLAB JOINT REPAIRS, SECTION 16050 - ELECTRICAL WORK and as shown on the drawings.

1.2 STAFF GAGES. Payment for all costs associated with mobilization and demobilization and the staff gages will be made at the contract lump sum price for "Staff Gages" as specified in SECTION 02200 - CARE OF WATER and SECTION 02840 - STAFF GAGES.

1.3 DEEP WELL PUMP AND MOTOR REHAB. Payment for rehabilitation of the deep well pump and motor will be made at the contract lump sum price for "Deep Well Pump And Motor Rehab - North Pump Station", which price and payment shall constitute full compensation for all costs associated with mobilization and demobilization, disassembly, removal, equipment, rehabilitation and installation of specified new parts, and the reassembly reinstallation and testing of the deep well pump presently installed as specified in the applicable parts of SECTION 02200 - CARE OF WATER; SECTION 15100 - PUMP REHABILITATION, SECTION 16050 - ELECTRICAL WORK and as shown on the drawings.

1.4 BASE FLOW PUMP. Payment for mobilization and demobilization, removal of the existing base flow pump and the designing, manufacturing, testing, delivering, storing and installation of the new base flow pump with all necessary discharge pipe modifications will be made at the contract lump sum price for "Base Flow Pump - East St. Louis Pump Station", which price and payment shall constitute full compensation for all costs associated with the work as specified in the applicable parts of SECTION 02200 - CARE OF WATER; SECTION 15200 - SUBMERSIBLE PUMP, CENTRIFUGAL, MIXED-FLOW TYPE, SECTION 16050 - ELECTRICAL WORK and as shown on the drawings.

1.5 FLEXIBLE FLAP VALVES. Payment for work associated with the flexible flap valves, including mobilization and demobilization, will be made at the contract lump sum price for "Flexible Flap Valves - East St. Louis Pump Station", which price and payment shall constitute full compensation for all costs associated with furnishing, installing, and testing the flap valves and demolishing the existing shutter gates as specified in the applicable parts of SECTION 02200 - CARE OF WATER; SECTION 15300 - FLEXIBLE FLAP VALVES, and as shown on the drawings.

1.6 RELOCATE VENT PIPE. Payment for relocating the vent pipe at Madison Pump Station will be made at the contract lump sum price for "Relocate Vent Pipe - Madison Pump Station", which price and payment shall constitute full compensation for all costs associated with mobilization and demobilization, and relocating the vent pipe as specified in the applicable

parts of SECTION 02200 - CARE OF WATER; SECTION 02540 - WASTEWATER COLLECTION SYSTEM and SECTION 02840 - STAFF GAGES, and as shown on the drawings.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

xxx

01090.11

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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

xxx

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SECTION 01090 - SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES. Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title.

The document number used in the citation is the number assigned by the sponsoring organization, e.g. UL 1 (1985; Rev thru Nov 1992) Flexible Metal Conduit. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for convenience, e.g. UL's unnumbered 1992 edition of their Building Materials Directory is identified as UL-01 (1992) Building Materials Directory. The sponsoring organization number (UL 1) can be distinguished from an assigned identifying number (UL-1) by the dash mark (-).

1.2 ORDERING INFORMATION. The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

1.2.1 See Paragraph entitled, "Availability of Specifications Listed in The DOD Index of Specifications and Standards (DODISS)", of the Instructions to Bidders for the availability of non-commercial specifications.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
11 West 42nd St
New York, NY 10036
Ph: 212-642-4900
Fax: 212-398-0023
Internet: www.ansi.org/

ASME INTERNATIONAL (ASME)
Three Park Avenue
New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: <http://www.asme.org/>

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
E-mail: cservice@astm.org

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)
1711 Arlingate Lane
P.O. Box 28518
Columbus, OH 43228-0518
Ph: 800-222-2768
Fax: 614-274-6899
Internet: www.asnt.org

AMERICAN WELDING SOCIETY (AWS)
550 N.W. LeJeune Road
Miami, FL 33126
Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
Internet: <http://www.amweld.org>

CODE OF FEDERAL REGULATIONS (CFR)
Order from:
Government Printing Office
Washington, DC 20402
Ph: 202-783-3238
Fax: 202-275-7703
Internet: <http://www.pls.com:8001/his/cfr.html>

CORPS OF ENGINEERS (COE)
Order from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services
Branch, TIC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Ph: 601-634-2355
Fax: 601-634-2506

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
445 Hoes Ln, P. O. Box 1331
Piscataway, NJ 08855-1331
Ph: 732-981-0060 OR 800-701-4333
Fax: 732-981-9667
Internet: www.ieee.org
E-mail: customer.service@ieee.org

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
1300 N. 17th St., Suite 1847
Rosslyn, VA 22209
Ph: 703-841-3200
Fax: 703-841-3300
Internet: <http://www.nema.org/>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
Ph: 617-770-3000
Fax: 617-770-0700
Internet: www.nfpa.org

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)
40 24th Street, 6th Floor
Pittsburgh, PA 15222-4656
Ph: 412-281-2331
Fax: 412-281-9992
Internet: www.sspc.org

UNDERWRITERS LABORATORIES (UL)
333 Pfingsten Rd.
Northbrook, IL 60062-2096
Ph: 847-272-8800
Fax: 847-272-8129
Internet: <http://www.ul.com/>
e-mail: northbrook@us.ul.com

PART 2 MATERIALS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 01130
ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 APPLICABLE PUBLICATIONS. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.1.1 Code of Federal Regulations (CFR).

40 CFR 261 Identification and listing of Hazardous Waste

1.1.2 Engineering Manuals (EM).

EM 385-1-1 U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 DEFINITIONS. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances of plant or animal communities; or degrade the environment from an aesthetic, cultural or historic perspective. Environmental protection is the prevention/control of pollution and habitat disruption that may occur during construction. The control of environmental pollution and damage requires consideration of air, water, land, biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive materials; and other pollutants.

1.3 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 - SUBMITTAL PROCEDURES:

1.3.1 Statements. Environmental Protection Plan; GA. Submit plan detailing Contractor's procedures for complying with all applicable environmental protection regulations and the special requirements of this contract.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS. The Contractor shall comply with all applicable Federal, State, and local laws and regulations. The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction.

1.4.1 Protection of Features. This section supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. The Contractor shall prepare a list of features requiring protection under the provisions of the contract clause, which are not specially identified on the drawings as environmental features requiring protection. The Contractor shall protect those environmental features shown

specially on the drawings, even if such preservation interferes with the Contractor's work under this contract.

1.4.2 Permits. This section supplements the Contractor's responsibility under the contract clause PERMITS AND RESPONSIBILITIES to the extent that the Government has already obtained environmental permits. A listing of the environmental permits is provided in SECTION 00800 - SPECIAL CLAUSES, Paragraph 3, Physical Data, and a copy of each permit will be provided at the preconstruction conference. The Contractor shall comply with the terms, and conditions of these permits. The Contractor shall also comply with other environmental commitments made by the Government.

1.4.3 Special Environmental Requirements. The Contractor shall comply with any special environmental requirements included at the end of this section. These special environmental requirements are an outgrowth of environmental commitments made by the Government during the project development.

1.4.4 Environmental Assessment of Contract Deviations. The Contract specifications have been prepared to comply with the special conditions and mitigation measures of an environmental nature which were established during the planning and development of this project. The Contractor is advised that deviations from the drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, alternate access routes, etc.) could result in the requirement for the Government to reanalyze the project from an environmental standpoint. Deviations from the construction methods and procedures indicated by the plans and specifications which may have an environmental impact will require an extended review, processing, and approval time by the Government. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.5 ENVIRONMENTAL PROTECTION PLAN. Within 15 calendar days of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan not later than 30 calendar days after receipt of the Notice to Proceed. The Contractor shall meet with representatives of the Contracting Officer to develop a mutual understanding relative to compliance with this section and administration of the environmental pollution control program. Acceptance is conditional and is predicated upon satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes in the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. The plan shall detail the actions that the Contractor shall take to comply with all applicable Federal, State, and local laws and regulations concerning environmental protection and pollution control and abatement, as well as the additional specific requirements of this contract. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The environmental protection plan

shall include, but not be limited to, the following:

1.5.1 List of State and Local Laws and Regulations. The Contractor shall provide as part of the Environmental Protection Plan a list of all State and local environmental laws and regulations, which apply to the construction operations under the Contract.

1.5.2 Spill Control Plan. The Contractor shall include as part of the environmental protection plan, a Spill Control Plan. The plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by the Emergency Response and Community Right-to-Know Act or regulated under State or local laws or regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

a. The name of the individual who will be responsible for implementing and supervising the containment and cleanup.

b. Training requirements for Contractor's personnel and methods of accomplishing the training.

c. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

d. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

e. The methods and procedures to be used for expeditious contaminant cleanup.

f. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity spill occurs. The plan shall contain a list of the required reporting channels and telephone numbers.

1.5.3 Recycling and Waste Minimization Plan. The Contractor shall submit a Recycling and Waste Minimization Plan as a part of the Environmental Protection Plan. The plan shall detail the Contractor's actions to comply with the following recycling and waste minimization requirements:

a. The Contractor shall participate in State and local Government sponsored recycling programs to reduce the volume of solid waste materials at the source;

b. Recovery of metal from debris and sale to recycling operation with Contractor retaining any money derived from sale;

c. Collection of aluminum cans at the site for recycling.

1.5.4 Contaminant Prevention Plan. As a part of the Environmental Protection Plan, the Contractor shall prepare a contaminant prevention statement identifying potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, water, or ground. The Contractor shall detail provisions to be taken to meet Federal, State, and local laws and regulations regarding the storage and handling of these materials.

1.5.5 Environmental Monitoring. The Contractor shall include in the plan the details of environmental monitoring requirements under the laws and regulations and a description of how this monitoring will be accomplished.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 SPECIAL ENVIRONMENTAL PROTECTION REQUIREMENTS.

3.1.1 Tree Protection. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized by the Contracting Officer. Where such special use is permitted, the Contractor shall provide effective protection to prevent damage to the trees and other land and vegetative resources. Unless specifically authorized by the Contracting Officer, no construction equipment or materials shall be placed or used within the dripline of trees shown on the drawings to be saved. No excavation or fill shall be permitted within the dripline of trees to be saved except as shown on the drawings.

3.1.2 U.S. Department of Agriculture (USDA) Quarantined Considerations. The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the USDA Plant Protection and Quarantine (USDA - PPQ) jurisdictional office for additional cleaning requirements that may be necessary.

3.1.3 Commercial Borrow. Prior to bringing commercially obtained borrow material onsite, the Contractor shall provide the Contracting Officer with the location of the borrow areas, the names of the owners and operators, and the types and estimated quantities of materials to be obtained from each source.

3.1.4 Disposal of Solid Wastes. Solid waste is rubbish, debris, waste materials, garbage, and other discarded solid materials (excluding clearing debris and hazardous waste as defined in following paragraphs). Solid waste shall be placed in containers and disposed of on a regular schedule. All handling and disposal shall be conducted in such a way as to prevent spillage and contamination. The Contractor shall transport all solid waste off site

and dispose of it in compliance with Federal, State, and local requirements. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of the landfill area.

3.1.5 Clearing Debris. Clearing debris is trees, tree stumps, tree trimmings, and shrubs, and leaves, vegetative matter, excavated natural materials (e.g., dirt, sand, and rock), and demolition products (e.g., brick, concrete, glass, and metals).

a. The Contractor shall collect trees, tree stumps, tree trimmings, shrubs, leaves, and other vegetative matter; and shall transport off site for proper disposal in compliance with Federal, State, and local requirements. The Contractor shall segregate the matter where appropriate for proper disposal. Untreated and unpainted scrap lumber may be disposed of with this debris where appropriate.

b. Excavated natural materials shall be transported from the project site for proper disposal in compliance with Federal, State, and local requirements.

c. Demolition products shall be transported from the project site for proper disposal in compliance with Federal, State, and local requirements.

3.1.6 Disposal of Contractor Generated Hazardous Wastes. Hazardous wastes are hazardous substances as defined in 40 CFR 261, or as defined by applicable State and local regulations. Hazardous waste generated by construction activities shall be removed from the work area and be disposed of in compliance with Federal, State, and local requirements. The Contractor shall segregate hazardous waste from other materials and wastes, and shall protect it from the weather by placing it in a safe covered location; precautionary measures against accidental spillage such as berming or other appropriate measures shall be taken. Hazardous waste shall be removed from the project site within 60 days. Hazardous waste shall not be dumped onto the ground, into storm sewers or open water courses, or into the sanitary sewer system.

3.1.7 Fuels and Lubricants. Fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants and waste oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with Federal, State, and local laws and regulations.

3.2 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES.

3.2.1 Discovered Historic, Archaeological, and Cultural Resources. If during construction activities, items are observed that may have historic or archaeological value (e.g., Native American human remains or associated objects are discovered), such observations shall be reported immediately to the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all

activities that may result in impact to or the destruction of these resources. The Contractor shall prevent its employees from trespassing on, removing, or otherwise disturbing such resources.

3.3 PROTECTION OF WATER RESOURCES. The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters.

3.3.1 Wastewater. Wastewater directly derived from concrete construction activities shall not be discharged before being treated to remove pollutants.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES. The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to, and damage of, fish and wildlife.

3.5 PROTECTION OF AIR RESOURCES. Special management techniques as set out below shall be implemented to control air pollution by the construction activities. These techniques supplement the requirements of Federal, State, and local laws and regulations; and the safety requirements under this Contract. If any of the following techniques conflict with the requirements of Federal, State, or local laws or regulations, or safety requirements under this contract, then those requirements shall be followed in lieu of the following.

3.5.1 Particulates. Airborne particulates, including dust particles, from construction activities and processing and preparation of materials shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, borrow areas, and all other work areas free from airborne dust which would cause a hazard or nuisance.

3.5.2 Other Air Pollutants.

3.5.2.1 Hydrocarbons and Carbon Monoxide. Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.5.2.2 Odors. Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.6 INSPECTION. If the Contracting Officer notifies the Contractor in writing of any observed noncompliance with contract requirements or Federal, State, or local laws, regulations, or permits, the Contractor shall inform the Contracting Officer of proposed corrective action and take such action to correct the noncompliance. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action is taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

3.7 MAINTENANCE OF POLLUTION CONTROL FACILITIES. The Contractor shall

maintain all constructed pollution control facilities and portable pollution control devices for the duration of the Contract or for the length of time construction activities create the particular pollutant.

3.8 TRAINING OF CONTRACTOR PERSONNEL. Contractor personnel shall be trained in environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel monthly. The training and meeting agenda shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, installation and care of facilities (vegetative covers, etc.), and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control. Anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants, shall also be discussed. Other items to be discussed shall include recognition and protection of archaeologic sites and artifacts.

3.9 EROSION CONTROL.

3.9.1 Unprotected Erodeable Soils. Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in cases where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the developed areas as approved by the Contracting Officer.

3.9.2 Disturbed Areas. The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

a. Retardation and Control of Runoff. Runoff from the construction site or from storms shall be controlled diversion ditches, benches, berms, and by any measures required by area wide plans under the Clean Water Act.

b. Erosion and Sedimentation Control Devices. The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as indicated in the Contractor Environmental Protection Plan or as indicated on the drawings. Berms, dikes, drains, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

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SECTION 01300 - SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL CLASSIFICATION. Submittals are classified as follows:

1.1.1 Government Approved (GA). Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.1.2 For Information Only (FIO). All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. These submittals shall be filed and maintained in the Contractor's field office subject to Government spot check.

1.2 APPROVED SUBMITTALS. The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error that may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After the Contracting Officer has approved submittals, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.3 DISAPPROVED SUBMITTALS. The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be furnished promptly to the Contracting Officer.

1.4 WITHHOLDING OF PAYMENT. Payment for materials incorporated in the work will not be made if required approvals have not been obtained. In addition; the Government will withhold 2% of the total bid price of the applicable item for which FIO technical submittals are not being maintained and on file at the Contractor's Field Office.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL. The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to the

submission of submittals for both the Government Approval (GA) and For Information Only (FIO), all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken.

Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288-R). At the end of this section is one set of ENG Form 4288-R listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Accident Prevention Program (00800-14), Statement of Required Insurance (00800-19), Environmental Protection Plan (01130-1.5) and Quality Control Plan (01440-3.2), shall be submitted as set forth in each applicable specification paragraph and should not be included as part of the Submittal Register ENG Form 4288-R. The Government has completed columns "d" through "r"; the Contractor shall complete columns "a" through "c" and "s" through "u" and submit the forms to the Contracting Officer for approval within 10 calendar days after Notice to Proceed. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated. The time for submission, procurement, lag/lead and delivery shall be entered through the Resident Management System (RMS) QC module. After entry of that data, the ENG Form 4288-R (RMS) shall be produced from the RMS QC module.

3.3 SCHEDULING. Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. It is the Contractor's responsibility to provide the Corps with timely, accurate, and complete submittal packages. The Corps, in turn, will process, review, and provide official responses to the Contractor within 30 calendar days after physical receipt of the submittal, unless otherwise noted in the Technical Provisions. The Contractor shall incorporate the stated Government review time in the submittal register. No delay damages or time extensions will be allowed for time lost in late submittals. The Contractor's Quality Control representative shall review the listing at least every 60 days and take appropriate action to maintain an effective system. Copies of updated or corrected listing shall be submitted to the Contracting Officer at least every 30 days in the quantity specified.

3.4 TRANSMITTAL FORM (ENG FORM 4025-R). The sample transmittal form (ENG Form 4025-R), attached to this section, shall be used for submitting Government Approved submittals in accordance with the instructions on the reverse side of the form. This form should also be used to document the Contractor Quality Control review, and approval of, For Information Only submittals prior to filing and maintaining in the field office. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted.

Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data

submitted for each item. The ENG Form 4025-R may be prepared by use of the Resident Management System (RMS) QC module.

3.5 SUBMITTAL PROCEDURE. Submittals shall be made as follows:

3.5.1 Procedures. The Contractor shall submit to the Contracting Officer for approval six copies of all shop drawings as called for under the various headings of these specifications.

3.5.2 Deviations. For submittals, which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025-R shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS. The Contractor shall carefully control its procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS. Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. The Contracting Officer will retain five copies of the submittal and one copy of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS. Approval of the Contracting Officer is not required on information only submittals. The Contractor shall maintain in his field office all current FIO submittals for use by CQC Manager during the course of the contract. The Government will periodically spot-check the Contractor's compliance with maintaining current and correct FIO submittals for CQC purposes. Any incorrect submittals found during the Government spot check will be immediately corrected by the CQC Manager. If the Contractor fails to keep the FIO submittals current and correct, 2% of the total bid price against the applicable bid item will be withheld. At the completion of the contract, the Contractor will submit the entire file of FIO submittals to the Government.

3.9 STAMPS. Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR (Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

3.10 SUBMITTALS REQUIRED WITHIN 15 DAYS AFTER RECEIPT OF NOTICE OF AWARD.

<u>Specification Section/Para No.</u>	<u>Description of Submittal</u>
00800-14	ACCIDENT PREVENTION PROGRAM
00800-19	STATEMENT OF REQUIRED INSURANCE
01130-1.5	ENVIRONMENTAL PROTECTION PLAN
01440-3.2	QUALITY CONTROL PLAN

xxx

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <small>(Read instructions on the reverse side prior to initiating this form)</small>						DATE	TRANSMITTAL NO.	
SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS <small>(This section will be initiated by the contractor)</small>								
TO:		FROM:		CONTRACT NO.		CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____		
SPECIFICATION SEC. NO. <small>(Cover only one section with each transmittal)</small>		PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR <input type="checkbox"/> FID <input type="checkbox"/> GOV'T. APPROVAL				
ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <small>(Type size, model number/etc.)</small>	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <small>(See instruction no. 3f)</small>	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION <small>(See Instruction No. 6)</small>	FOR CE USE CODE
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a.	b.	c.	d.	e.	f.	g.	h.	i.
REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.							
NAME AND SIGNATURE OF CONTRACTOR								
SECTION II - APPROVAL ACTION								
ENCLOSURES RETURNED <small>(List by Item No.)</small>				NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY				DATE
ENG FORM 4025-R, MAR 95				(IFR 415-1-10)				EDITION OF SEP 93 IS OBSOLETE.
				SHEET ____ OF ____				(Prepared: CEMP-CE)

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A --	Approved as submitted.	E --	Disapproved (See attached).
B --	Approved, except as noted on drawings.	F --	Receipt acknowledged.
C --	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX --	Receipt acknowledged, does not comply as noted with contract requirements.
D --	Will be returned by separate correspondence.	G --	Other (Specify)

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

SUBMITTAL REGISTER (ER 415-1-10)										CONTRACT NO.																
EAST ST. LOUIS MISCELLANEOUS PUMP STATION REPAIRS										CONTRACTOR				SPECIFICATION SECTION												
A C T I V I T Y N O	TRANS- MITTAL NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION		GOVERNMENT ACTION		REMARKS			
				D R A W I N G S	A D J U S T M E N T S	C H E M I C A L S	S T R U C T U R E S	S T A T E M E N T S	R E P O R T S	C E R T I F I C A T E S	C E R T I F I C A T E S	O & M M A T E R I A L S	R E M O V A L S		O F F I C E R S	I N F O R M A T I O N O N L Y	G O V E R N M E N T P R O V I D E N C E	S U B M I T	A P P R O V A L N E E D E D B Y	M A T E R I A L N E E D E D B Y	C O D E	D A T E		S U B M I T T O G O V E R N M E N T	C O D E	D A T E
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.	aa.
		15100.1.4.1	SHOP DRAWINGS		X											X										
		15100.1.4.2	FIELD SERVICE REP RESUME					X									X									
		15100.1.4.3	DISASSEMBLY/REMOVAL PLAN					X									X									
		15100.1.4.4	ADDITIONAL PUMP REPAIRS					X									X									
		15200.1.5.1.1	MATERIALS	X																						
		15200.1.5.1.2	EQUIPMENT SUPPLIES AND PERFORMANCE	X													X									
		15200.1.5.1.3	SPARE PARTS	X													X									
		15200.1.5.1.4	COMPUTATIONS	X													X									
		15200.1.5.2.1	SUBMERSIBLE PUMP		X												X									
		15200.1.5.3.1	INSTALLATION INSTRUCTION MANUAL			X											X									
		15200.1.5.3.2	OPERATION AND MAINTENANCE MANUAL			X											X									
		15200.1.5.4.1	INSTALLATION LIST				X										X									
		15200.1.5.4.2	PUMP ERECTION ENGINEER RESUME				X										X									
		15200.1.5.4.3	TEST SET-UP PLAN					X									X									
		15200.1.5.4.4	QUALITY ASSURANCE FIELD TEST PLANS					X									X									
		15200.1.5.5.1	PERFORMANCE TEST						X								X									
		15200.1.5.5.2	MOTOR TESTS							X							X									
		15300.1.4.1	DESIGN DATA	X																						
		15300.1.4.2	MATERIALS					X																		
		15300.1.4.3	SHOP DRAWINGS		X																					
		15300.1.4.4.1	INSTALLATION MANUAL													X										
		15300.1.4.4.2	O & M MANUALS													X										
		15300.1.4.5	FIELD REP RESUME					X									X									

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SECTION 01320
PROJECT SCHEDULE

PART 1 - GENERAL

1.1 REFERENCES. The publications listed below form a part of the specification to the extent referenced. The publications are referenced in the text by basic designation only.

ENGINEERING REGULATIONS (ER)

ER 1-1-11(1995)	Progress, Schedules, and Network Analysis Systems
-----------------	--

1.2 QUALIFICATIONS. The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION.

3.1 GENERAL REQUIREMENTS. Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT. The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel will result in an inability of the Contracting Officer to evaluate the Contractor's progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer, and those revisions have not been included in the Project Schedule, the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 PROJECT SCHEDULE. The Project Schedule shall be submitted to the Contracting Officer within 10 days of Notice to Proceed. The schedule shall contain sufficient detail to show the order in which the Contractor proposes to perform the work and shall contain the following features as a minimum:

- A separate activity bar shall be created for each of the salient features of work (including acquiring materials, plant, equipment, mobilization, and demobilization)

- The start date, completion date, and scheduled percentage complete per month shall be indicated for each activity.
- The start date for the contract, which is the date of Notice to Proceed, any contract required interim completion dates, and the required completion date shall be indicated on the schedule and all time between said dates shall be accounted for on the schedule.
- The associated contract pay item (CLIN, Contract Line Item Number) shall be indicated for each activity. In addition, the dollar amount for each activity shall be indicated.
- A contract earnings schedule shall be included with the Project Schedule indicating the scheduled earnings per month and cumulative earnings through the duration of the contract.

3.3.1 Schedule Updates. The Contractor shall enter the actual progress on the approved progress schedule at least every 60 days and shall submit this annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval a supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

01440.11

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SECTION 01440 - CONTRACTOR QUALITY CONTROL

PART 1 - GENERAL

1.1 REFERENCES. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.1.1 American Society for Testing and Materials (ASTM).

ASTM D 3740 (1996)	Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329 (1998)	Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT. Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 - PRODUCTS. (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product that complies with the contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

3.2 QUALITY CONTROL PLAN.

3.2.1 General. The Government will consider an interim plan for the first 60 days of operation to be submitted no later than 15 days after receipt of Notice of Award. Subsequent to submittal of an interim plan, the Contractor shall furnish for acceptance by the Government, not later than 35 days after receipt of Notice of Award, the original and one copy of the total Contractor Quality Control (CQC) Plan proposed for use in implementing the requirements of the Contract Clause entitled "Inspection of Construction". If an interim plan is not submitted, the Contractor shall submit for approval within 15 days after receipt of Notice of Award, the total Quality Control Plan specified above. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. Construction will be permitted to begin only after acceptance of the CQC Plan.

3.2.2 Content of the CQC Plan. The CQC plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC system manager who shall report to the project manager or someone higher in the Contractor's organization. Project Manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. The name and address of the Corps of Engineers validated commercial testing laboratory to be used for quality control testing; a letter of validation from the Material Testing Center (MTC); a list of applicable ASTM procedures that the laboratory is validated to perform; and the qualifications of the field technician(s) identified for the project.

d. A copy of the letter to the CQC System Manager signed by an authorized official of the firm, which describes the responsibilities and delegates the authorities of the CQC System Manager.

e. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, off-site fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

f. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

g. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

h. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

i. Reporting procedures, including proposed reporting formats.

j. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks and has separate control requirements. It could be identified by different trades or disciplines, or it could be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list shall be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan. Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to

obtain the quality specified.

3.2.4 Notification of Changes. After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING. After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION. The Contractor shall identify an individual within its organization at the worksite who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall be on the site at all times during construction and shall be employed by the Contractor. This Contractor Quality Control System Manager shall be Corps' certified and shall be approved by the Contracting Officer. To become "certified" the manager must have completed the course entitled "Construction Quality Management for Contractors". This course is offered quarterly at the St. Louis Corps of Engineers District Office. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. Period of absence may not exceed one (1) week at any one time, and not more than ten (10) workdays during a calendar year. The requirements for the alternate will be the same as for the designated CQC Manager.

3.4.1 CQC Organizational Staffing. The Contractor shall provide a CQC staff, which shall be at the worksite at all times during progress, with complete authority to take any action necessary to ensure compliance with the contract.

3.4.1.1 CQC Staff. Following are the minimum requirements for the CQC staff. These minimum requirements will not necessarily assure an adequate staff to meet the CQC requirements at all times during construction. The actual strength of the CQC staff may vary during any specific work period to cover the needs of the work period. When necessary for a proper CQC organization, the Contractor shall add additional staff at no cost to the Government. This listing of minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with contract requirements. All CQC staff members shall be certified in accordance with paragraph 01440-3.4 QUALITY CONTROL ORGANIZATION, and shall be subject to acceptance by the Contracting Officer.

3.4.1.2 CQC System Manager. The CQC System Manager and staff shall be assigned no scheduling or other duties.

3.4.1.3 Assistant CQC System Manager. The assistant CQC System Manager shall hold the same qualifications as the CQC System Manager and shall be on site at all times.

3.4.2 Organizational Changes. The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

3.5 SUBMITTALS. Submittals shall be made as specified in SECTION 01300 - SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL. The controls shall include at least three phases of control to be conducted by the CQC System Manager for all definable features of work, as follows:

3.6.1 Preparatory Phase. This phase shall be performed prior to beginning work on each definable feature of work and shall include:

- a. A review of each paragraph of applicable specifications.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. A check to assure that provisions have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order

to meet contract specifications.

3.6.2 Initial Phase. This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verification of full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Comparison with sample panels is appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least (24) hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase. Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases. As determined by the Government, additional preparatory and initial phases may be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, on-site production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.7 TESTS.

3.7.1 Materials Testing and Inspection. Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government. All testing shall be performed by a Corps of Engineers validated commercial testing laboratory. Both the field and permanent laboratory shall be validated. A list of current validated testing laboratories can be viewed at www.wes.army.mil/SL/MTC/mtc.htm or you may contact Mr. Steve O'Connor, St. Louis District, Geotechnical Branch, at Telephone 314-331-8425 for laboratory verifications. If the Contractor elects to establish testing facilities, work requiring testing will not be permitted until the Contractor's facilities have been validated by the Materials Testing

Center. The Contractor shall ensure that the Materials Testing Center is reimbursed for all costs regarding validation of testing laboratories pertaining to this contract.

3.7.2 Testing Procedure. The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product that conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a testing laboratory on or off site that is validated by the Material Testing Center (MTC) for the Corps of Engineers. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.3 Testing Laboratories.

3.7.3.1 Capability Check. The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329, and shall be validated by the Corps of Engineers MTC.

3.7.3.2 Capability Recheck. If the selected laboratory fails the capability check, the Contractor will be assessed any charges incurred to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.4 On-Site Laboratory. If an onsite CQC laboratory is established, the Contractor shall submit the request for validation to the District POC in a timely manner and emphasize the critical need. After the request to the MTC is submitted, the Contractor should anticipate a six-week turn around and reflect the turn-around time in its scheduling. The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to

make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.5 Furnishing or Transportation of Samples for Testing. Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, f.o.b., at the following address:

For delivery by mail:

US Army Engineer Research
and Development Center
P.O. Box 631
Vicksburg, MS 39181-0631

For other deliveries:

US Army Engineer Research
and Development Center
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

Coordination for each specific test, exact delivery location, and dates shall be made through the Area Office.

3.8 COMPLETION INSPECTION. At the completion of all work or any increment thereof established by a completion time stated in the Contract Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Government. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.9 DOCUMENTATION. The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on the form as produced through the Resident Management System (RMS) QC module that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings

requirements.

f. Submittals reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every seven days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 NOTIFICATION OF NONCOMPLIANCE. The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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SECTION 01500 - TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS. As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall provide the temporary facilities specified herein. The temporary facilities shall be maintained by the Contractor during the life of the contract and upon completion and acceptance of the work shall be removed from the site of the work.

1.1.1 No Separate Payment. Payment for materials and equipment furnished under this section will not be paid for separately, and all costs in connection therewith shall be included in other items for which payment is provided.

1.2 APPLICABLE PUBLICATIONS. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Engineering Manuals (EM).

EM 385-1-1	U.S. Army Corps of Engineers Safety and Health Requirements Manual
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1.2.2 Engineering Pamphlets (EP).

EP 310-1-6A	U.S. Army Corps of Engineers Sign Standards Manual, VOL 1, CH 1
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PART 2 PRODUCTS

2.1 TEMPORARY PROJECT AND SAFETY SIGNS. The Contractor shall furnish and erect one temporary project sign and one safety sign at North Pump Station and at East St. Louis Pump Station in the location designated by the Contracting Officer. The signs shall conform to the requirements of U.S. Army Corps of Engineers Sign Standard Manual EP-310.1-6a, Section 16 entitled, "Construction Project Signs", Pages 16.1 through 16.4, copies of which are enclosed at the end of this section. If sign is to be placed on a floating plant, it may be half sized. Information will be furnished by the Contracting Officer as to the location and wording of the signs.

PART 3 EXECUTION

3.1 CLEANUP. Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away as directed by the Contracting Officers Representative or designated Government Representative(s).

3.2 RESTORATION OF STORAGE AREA. Upon completion of the project, areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition.

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The use of signs to identify Corps managed or supervised design, construction, and rehabilitation projects—both for military and civil works is an important part of efforts to keep the public informed of Corps work. For this purpose, a construction project sign package has been adopted. This package consists of two signs; one for project identification and the other to show on-the-job safety performance of the contractor.

These two signs are to be displayed side by side and mounted for reading by passing viewers. Exact placement location will be designated by the contracting officer.

The panel sizes and graphic formats have been standardized for visual consistency throughout all Corps operations.

Panels are fabricated using HDO plywood with dimensional lumber uprights and bracing. The sign faces are non-reflective vinyl.

All legend sare to be die-cut or computer-cut in the sizes and typefaces specified and applied to the white panel background following the graphic formats shown on pages 16.2-3. The Communications Red panel on the left side of the construction project sign with Corps signature (reverse version) is screen printed onto the white background.

A display of these two signs is shown on the following two pages. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Below are two samples of the construction project identification sign showing how this panel is adaptable for use to identify either military (top), or civil works projects (bottom). The graphic format for this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large

4' x 4' section of the panel on the right is to be white with black legend. The 2' x 4' section of the sign on the left with the full Corps signature (reverse version) is to be screen printed Communications Red on the white background.

This sign is to be placed with the Safety Performance Sign shown on the following

page. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Legend Group 1: One- to two-line description of Corps relationship to project.

Color: White

Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" Reverse Signature (6" Castle).

Color: White

Typeface: 1.25" Helvetica Regular

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.

Color: Black

Typeface: 3" Helvetica Bold
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).

Color: Black

Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

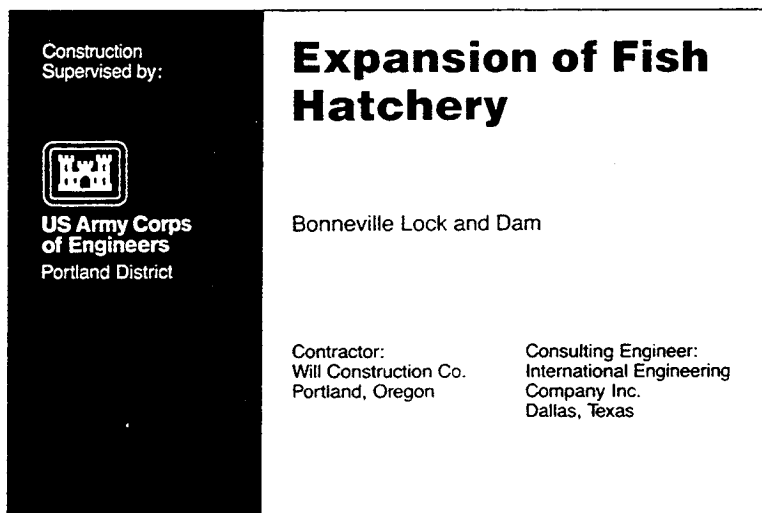
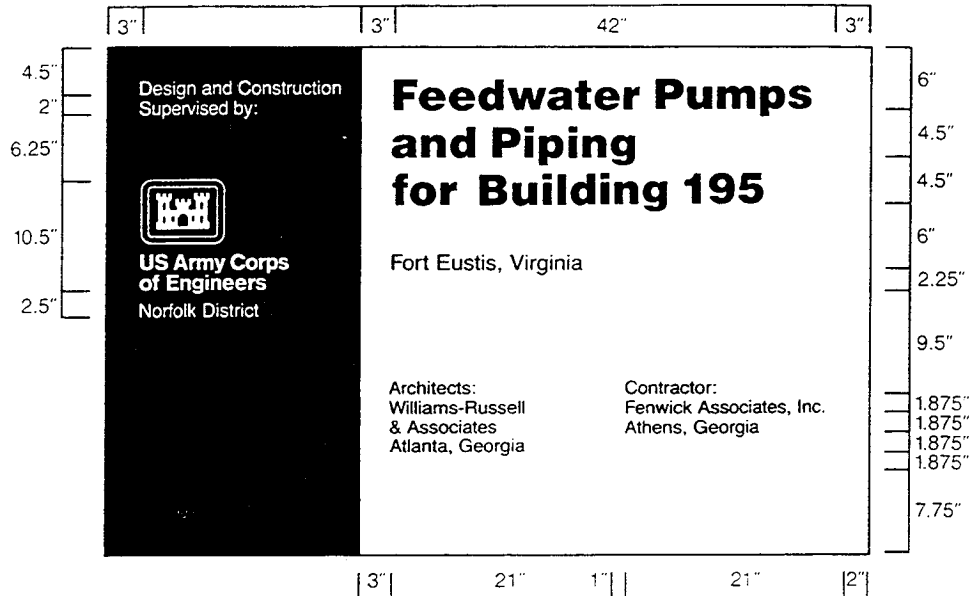
Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.

Color: Black

Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4" x 6"	4" x 4"	HDO-3	48"	WH-RD/BK

Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the construction project identification sign specified on page 16.2.

The graphic format, color, size and typefaces used on the sign are to be reproduced exactly as specified below. The title

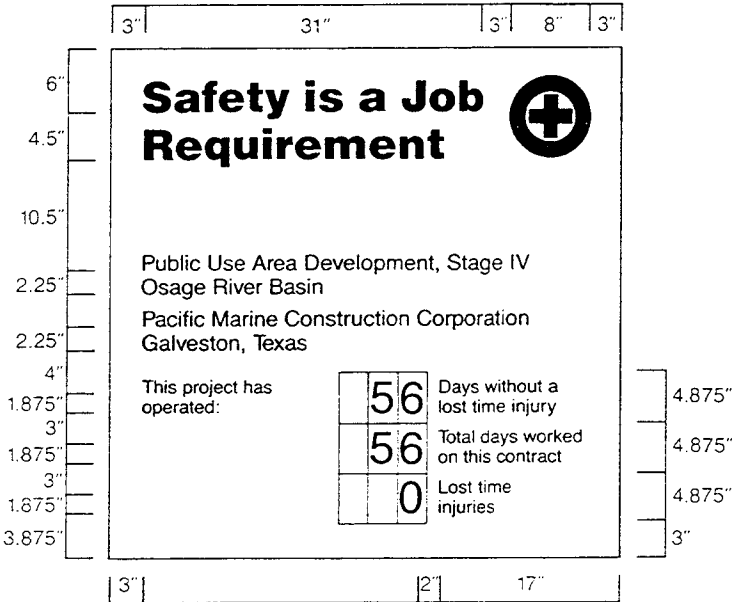
with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend Groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

Safety record numbers are mounted on individual metal plates and are screw-mounted to the background to allow for

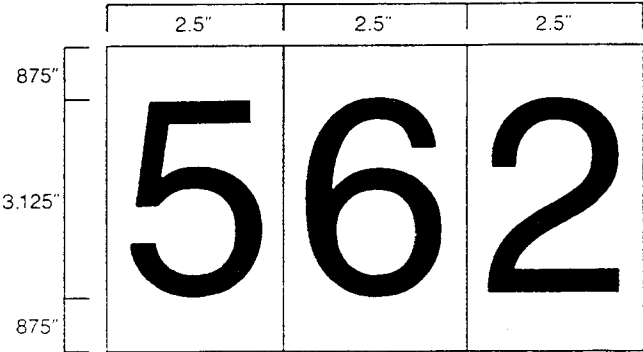
daily revisions to posted safety performance record.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

- Legend Group 1: Standard two-line title "Safety is a Job Requirement", with (8" od.) Safety Green First Aid logo. Color: To match PMS 347 Typeface: 3" Helvetica Bold Color: Black
- Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"
- Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"
- Legend Group 4: Standard safety record captions as shown. Color: Black Typeface: 1.25" Helvetica Regular
- Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background. Color: Black Typeface: 3" Helvetica Regular Plate size: 2.5" x .5"
- All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4" x 4"	4" x 4"	HDO-3	48"	WH/BK-GR



All Construction Project Identification signs and Safety Performance signs are to be fabricated and installed as described below. The signs are to be erected at a location designated by the contracting officer and shall conform to the size, format, and typographic standards shown on

pages 16.2-3. Detailed specifications for HDO plywood panel preparation are provided in Appendix B.

Shown below the mounting diagram is a panel layout grid with spaces provided for project information. Photocopy this page and use as a worksheet when preparing sign legend orders.

For additional information on the proper method to prepare sign panel graphics, contact the District sign coordinator.

The sign panels are to be fabricated from .75" High Density Overlay Plywood. Panel preparation to follow HDO specifications provided in Appendix B.

Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing.

All graphics except for the Communications Red background with Corps signature on the project sign are to be die-cut or computer-cut non-reflective vinyl, pre-spaced legends prepared in the sizes and typefaces specified and applied to the background panel following the graphic formats shown on pages 16.2-3.

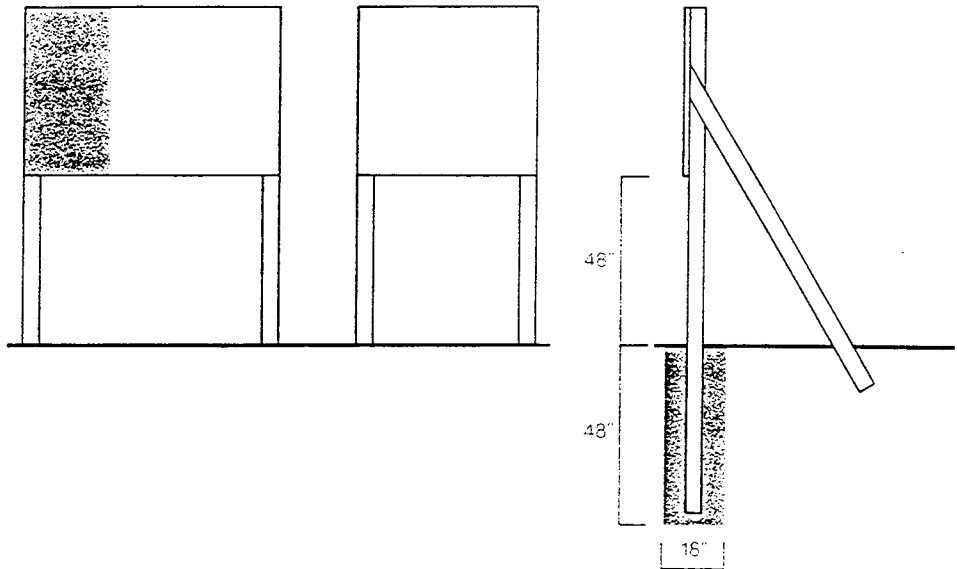
The 2' x 4' Communications Red panel (to match PMS-032) with full Corps signature (reverse version) is to be screen printed on the white background. Identification of the District or Division may be applied under the signature with white cut vinyl letters prepared to Corps standards. Large scale reproduction artwork for the signature is provided on page 4.8 (photographically enlarge from 6.875" to 10.5").

Drill and insert six (6) .375" T-nuts from the front face of the HDO sign panel. Position holes as shown. Flange of T-nut to be flush with sign face.

Apply graphic panel to prepared HDO plywood panel following manufacturers' instructions.

Sign uprights to be structural grade 4" x 4" treated Douglas Fir or Southern Yellow Pine, No.1 or better. Post to be 12' long. Drill six (6) .375" mounting holes in uprights to align with T-nuts in sign panel. Countersink (.5") back of hole to accept socket head cap screw (4" x .375").

Assemble sign panel and uprights. Imbed assembled sign panel and uprights in 4' hole. Local soil conditions and/or wind loading may require bolting additional 2" x 4" struts on inside face of uprights to reinforce installation as shown.



Construction Project Sign Legend Group 1: Corps Relationship

1. _____
2. _____

Legend Group 2: Division/District Name

1. _____
2. _____

Legend Group 3: Project Title

1. _____
2. _____
3. _____

Legend Group 4: Facility Name

1. _____
2. _____

Legend Group 5a: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Legend Group 5b: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Safety Performance Sign Legend Group 1: Project Title

1. _____
2. _____

Legend Group 2: Contractor/A&E

1. _____
2. _____

02200.11

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SECTION 02200
CARE OF WATER

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PART 2 PRODUCTS (NOT APPLICABLE)

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SECTION 02200 - CARE OF WATER

PART 1 GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, materials, and equipment for the maintenance, diversion, care, control, and removal of storm water and sewage flow through the forebay, gravity drain, junction box and discharge chamber structures at the various pump stations being worked on under this contract.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations, including but not limited to the following:

- a. Care of water plan.
- b. Coordination with Metro East Sanitary District (MESD).
- c. Inspections at the worksite for damage and defects in the operation and maintenance of the care of water plan.
- d. Necessary restoration of the discharge chambers, forebays, gatewell structures and appurtenances due to flow diversion/control.

1.2.2 Reporting. A copy of the records of inspection and tests, as well as the corrective action taken, shall be furnished to the Government daily.

1.3 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES.

1.3.1 Care of Water Plan. GA. Before starting installation of any care of water plan at any pump station, the Contractor shall prepare and submit to the Contracting Officer for approval a detailed plan, including equipment used and sequence of operations for care of water for each pump station. The Contractor shall coordinate his plan with MESD and provide written verification acknowledging MESD's approval of the plan. The written verification shall be submitted with the detail care of water plan within 60 days after receipt of Notice to Proceed.

1.3.2 Bulkhead Design Computations. GA. If any bulkheads are used during work on these pump stations the Contractor shall submit design computations, sealed by a registered structural engineer in the state of Illinois. The Contractor shall submit design computations for any damming structure utilized for the diversion of landside gravity flow through the

forebays or discharge chambers in his care of water plan. This structure shall be removable so as not to interfere with maintaining full operational capabilities of the associated pump station at any time.

1.4 GENERAL. The care of water specified herein consists of removal and diversion of flow passing through the pump station sumps, forebays, junction boxes and discharge chamber areas during construction operations and providing adequate channel drainage, including any necessary silt removal and dewatering during construction operations. The term stoplogs and bulkheads are used synonymously herein and on the contract reference drawings. Table 1, located at the end of this section, lists approximate gatewell structures and corresponding river elevations and stages to assist the Contractor in identifying at what elevations water will be in the pumping stations. Note that significant water depths exist prior to gate closure. The Contractor shall provide such facilities and take such measures as necessary to enable all work in the pump station sumps and forebay areas, as specified herein and shown on the contract drawings, to be performed in the dry. Water that has accumulated in the sump and forebay areas during construction operations shall be removed by the Contractor at no additional cost to the Government. The Contractor shall prevent riverside water from backing into the construction area. The Contractor will be required to use the current 3-day Mississippi River forecast from the National Weather Service for determining when construction operations can take place in the various pump stations and gravity drains gatewells.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 CARE OF WATER. The Contractor shall be responsible for care of water at each of the pump stations.

3.1.1 Madison Pump Station. Madison pump station normally experiences no flow. Flash flooding causes the water to rise quickly in the interior. All gravity flow passes through the forebay, the double 6' x 7' sluice gate openings, the double 6' x 7' R.C. sewer and the emergency gatewell to the river. The double 6' x 7' sluice gates and the emergency gatewell gates are normally open. When the 6' x 7' gates are closed, all flow is diverted to the pumps. The flow is then pumped through the discharge chamber and the emergency gatewell to the river. The Contractor shall prevent flow into the discharge chamber while removing the existing sanitary vent and repairing the hole in the discharge chamber while the Mississippi River is forecasted to be below Stage 17.0 feet at the St. Louis Gage. The Contractor shall remove all equipment from the discharge chamber and cover the vent hole in the discharge chamber whenever the Mississippi River is forecasted to be above Stage 17.0 feet at the St. Louis Gage. The Contractor shall also divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 10.0 feet at the St. Louis Gage.

3.1.2 East St. Louis Pump Station. East St. Louis pump station normally experiences no flow. Flash flooding causes the water to rise quickly

in the interior. All gravity flow passes through the 10.5' x 12.5' roller gate opening, the 12.5' x 12.5' box sewer and the emergency gatewell to the river. The emergency gatewell contains a 12.5' x 12.5' roller gate. The 10.5' x 12.5' roller gate and the emergency gatewell roller gate are normally open. When the 10.5' x 12.5' roller gate is closed, all flow is diverted through the three 14' x 10' forebay roller gates to the pumps. There is a 10.5' diameter sewer to the south of the station. When the sluice gate on this sewer is closed flow is also diverted from this sewer through the three forebay roller gates to the pumps. All flow is then pumped through the discharge chamber and the emergency gatewell to the river. All flow from the 10.5" diameter (gravity and pumped) passes through the emergency gatewell.

3.1.2.1 Baseflow Pump Replacement. The Contractor shall divert flow around the work areas in the station sump and forebay areas during replacement of the baseflow pump. This work shall be done when the Mississippi River is forecasted to be below Stage 10.0 feet on the St. Louis Gage.

3.1.2.2 Staff Gages. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is forecasted to be below Stage 7.0 feet on the St. Louis Gage.

3.1.2.3 Flexible Flap Valves. The Contractor shall divert pumped effluent from the existing baseflow pumps away from the work area below the existing shutter gates. The shutter gates shall be replaced when the Mississippi River is forecasted to be below Stage 15.0 on the St. Louis Gage.

3.1.3 South Pump Station. South Pump Station normally experiences continuous gravity flow from Harding Ditch. Flash flooding in this ditch and in Prairie du Pont Creek (riverside of the levee) causes the water to rise quickly in and near the pump station. All gravity flow passes through the gatewell to the river. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 12.0 feet at the St. Louis Gage and Prairie du Pont Creek is not experiencing any significant flows.

3.1.4 Canal No. 1 Pump Station. Canal No. 1 Pump Station normally experiences no flow from Canal No. 1 Ditch. Flash flooding in this ditch and in Prairie du Pont Creek (riverside of the levee) causes the water to rise quickly in and near the pump station. All gravity flow passes through the gatewell to the river. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 15.0 feet at the St. Louis Gage and Prairie du Pont Creek is not experiencing any significant flows.

3.1.5 Cahokia Pump Station. Cahokia Pump Station normally experiences continuous gravity flow from Cahokia Slough. Flash flooding in this slough and in Prairie du Pont Creek (riverside of the levee) causes the water to rise quickly in and near the pump station. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages

shall be installed while the Mississippi River is below Stage 9.0 feet at the St. Louis Gage and Prairie du Pont Creek is not experiencing any significant flows.

3.1.6 Granite City Nos. 1, 2, & 3 and Phillip's Reach Pump Stations. The Granite City Nos. 1, 2, and 3 Seepage Pump Stations and the Phillips Reach Seepage Pump Station normally experience no flow. Either stormwater run-off from the adjacent levee or seepage flows from relief wells located along the paved ditches leading to each pump station when the Mississippi River is above Stage 30.0 feet at the St. Louis Gage are the only sources of flow. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 20.0 feet at the St. Louis Gage.

3.1.7 Venice Pump Station. Venice Pump Station normally experiences no flow. Flash flooding causes water to rise quickly in the interior. All gravity flow passes through Junction Box No. 1, the 4' x 4' R.C. sewer, the gatewell and Junction Box No. 2 to the Mississippi River. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 13.0 feet at the St. Louis Gage.

3.1.8 North Pump Station. North Pump Station normally experiences continual gravity flow from Cahokia Creek. All flow passes through the four (4) 8' x 12' roller gates, the discharge chamber, the triple 12' x 12' reinforced concrete sewers and the emergency closure structure to the Mississippi River. The emergency closure structure contains three (3) 10' x 12' roller gates. When the four (4) 8' x 12' roller gates in the discharge chamber are closed all flow is diverted to the pump station sump where the flows are pumped into the discharge chamber.

3.1.8.1 Pump Discharge Pipe Repair. The Contractor shall divert flow from the area around the pump discharge flap gates whenever required for repairs to the pump discharge pipes. The Contractor shall work on the pump discharge pipes repairs when the Mississippi is forecasted to be below Stage 8.0 on the St. Louis Gage.

3.1.8.2 Staff Gages. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is forecasted to be below Stage 8.0 feet on the St. Louis Gage.

3.1.9 MoPac Gravity Drain. MoPac Gravity Drain normally experiences continuous gravity flow from Blue Waters Ditch. Flash flooding in this ditch and in Prairie du Pont Creek (riverside of the levee) causes the water to rise quickly in and near the pump station. The Contractor shall divert flow around the work areas required for the staff gages to be installed. The staff gages shall be installed while the Mississippi River is below Stage 10.0 feet at the St. Louis Gage and Prairie du Pont Creek is not experiencing any significant flows.

TABLE 1

METRO-EAST SANITARY DISTRICT - CARE OF WATER INFORMATION

FACIL- ITY NO.	LOCATION	FOREBAY FLOOR ELEV.	FOREBAY FLOOR STAGE	INVERT GW ELEV.	GW RIVER STAGE	FACILITY OPER. CLOSURE RIVER ELEV. STAGE
PS-3	Granite City No. 1 Pump Station	411.5	NA	NA	NA	NA 30.0
PS-4	Granite City No. 2 Pump Station	410.7	NA	NA	NA	NA 30.0
PS-6	Granite City No. 3 Pump Station	410.0	NA	NA	NA	NA 30.0
PS-7	Madison Pump Station	392.5	11.0	392.2	10.7	398.5 17.0
PS-8	Venice Pump Station	395.0	13.8	395.5	14.3	400.3 19.0
PS-10	North Pump Station	388.7	8.2	386.7	6.2	398.3 18.0
PS-11	East St. Louis Pump Station	386.7	7.0	386.70	7.0	390.8 11.0
PS-13	Phillips Reach Pump Station	407.7	NA	NA	NA	NA 30.0
PS-14	Cahokia Pump Station	390.0	11.8	387.5	9.3	393.2 15.0
GW-29	MoPac Gravity Drain	390.6	12.3	389.2	11.0	395.1 17.0
PS-15	South Pump Station	392.4	14.2	391.95	13.8	400.5 22.5
PS-16	Canal No. 1 Pump Station	401.25	23.0	395.8	17.6	403.7 26.0

Note: All elevations are in feet (NGVD).

Note: All stages are in feet measured at the St. Louis gage.

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LEGEND

FOREBAY FLOOR ELEV. - The invert elevation of the forebay area of each pump station. At the MoPac location this is the invert elevation of the gravity drain landside headwall.

FOREBAY FLOOR STAGE - The St. Louis Gage reading which corresponds to the forebay floor elevation at each facility.

INVERT GW ELEV. - The elevation of the invert of the sewer or gravity drain at the gatewell location where the riverside staff gage will be installed.

GW RIVER STAGE - The St. Louis Gage reading which corresponds to the elevation of the invert of the sewer or gravity drain at the gatewell location.

GATE CLOSURE ELEV. - The water surface elevation at which the gravity drain flood control gate(s) in the gatewell at the facility are closed.

CLOSURE RIVER STAGE - The St. Louis Gage reading which corresponds to the elevation at which the gravity drain flood control gate(s) are closed.

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SECTION 02540
WASTEWATER COLLECTION SYSTEM

PART 1 - GENERAL

1.1 SCOPE. The work covered by this section includes furnishing all materials, labor, plant and equipment, and performing all operations necessary for completing the work as specified herein and as shown on the sketches attached at the end of this section.

1.2 REFERENCES. The work covered by this section consists of furnishing all plant, labor, equipment and material, and performing all operations necessary for the design and installation of the wastewater collection system as specified herein and as shown on the drawings.

1.2.1 American Society for Testing and Materials (ASTM).

C 1107 (1999)	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
D 1785-91	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120.
F 477-90	Elastomeric Seals (Gaskets) for Joining Plastic Pipe

1.3 GENERAL REQUIREMENTS. The sanitary septic sewer system as specified herein and as shown on the sketches consists primarily of the relocation of a 4-inch Schedule 40 PVC vent pipe from the discharge chamber at Madison Pump Station to the exterior wall on the south side of the pump station adjacent to the existing septic tank.

1.4 ACCEPTANCE. Work covered by this section will not be accepted until backfilling connected with the work has been completed satisfactorily. Any section of sewer pipe that is found defective in material, alignment, grade, or joints before acceptance shall be satisfactorily corrected by the Contractor at the Contractor's expense.

1.5 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.5.1 Data. Materials and Equipment; GA. Submit manufacturer's complete descriptive data for all materials and equipment proposed for use in the wastewater collection system.

1.5.2 Statement. Excavation, Backfill, and Compaction Plan; GA. Submit a detail excavation, backfill, and compaction plan for work specified in this section.

1.6 PROTECTION OF EXISTING FACILITIES. Movement of heavy equipment over and/or adjacent to existing facilities shall be done with care. The Contractor shall be responsible for any damage caused by its operations and replacement of such damaged facilities shall be at the expense of the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS. The following materials shall conform to the respective specifications and other requirements specified below. Materials for the vent

pipe shall meet the requirements and approval of Illinois Public Health Department.

2.1.1.1 Schedule 40 PVC Pipe and Fittings. Vent pipe and fittings shall conform to ASTM D 1785-91. Rubber gaskets for Schedule 40 PVC pipe shall conform to ASTM F 477-90.

PART 3 - EXECUTION

3.1 INSTALLATION.

3.1.1.1 General. The Contractor shall remove the existing vent pipe attached to the sluice gate stop logs and relocate to the south exterior wall of the pump station as shown on the sketches attached to the end of this section.

3.1.2 Pipe.

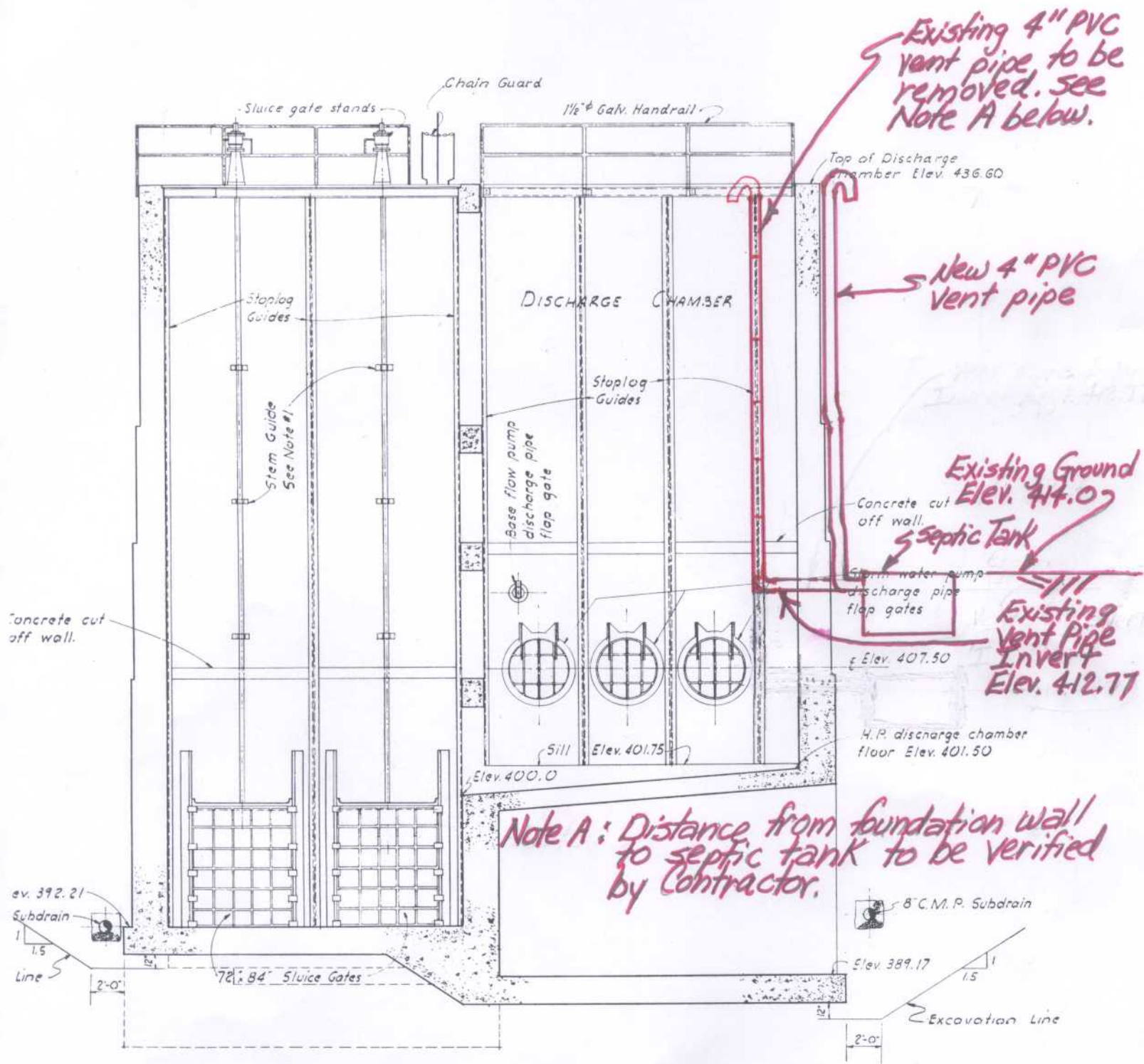
3.1.2.1 Cutting of Pipe. Cutting of pipe shall be accomplished in a neat and workmanlike manner without damage to the pipe. Unless otherwise recommended by the manufacturer and approved by the Contracting Officer, cutting shall be performed with an approved type mechanical cutter.

3.1.3 Protection of Property and Surface Structures. Trees, shrubbery, fences, poles and all other property and existing surface structures shall be protected during construction operations unless their removal for purposes of construction is authorized by the Contracting Engineer. Any fences, poles, or other man-made surface improvements, which are moved or disrupted by the contractor, shall be restored to the original conditions, after construction is completed, at the contractor's expense.

3.1.4 Relocation of Vent Pipe. The Contractor shall disconnect the existing 4 inch PVC vent pipe from the stop log guides for the sluice gates within the discharge chamber and attach it to the south exterior walls of the pump station adjacent to the existing septic tank as shown on the sketches attached at the end of this section. The Contractor shall provide any additional materials and equipment to properly install the vent pipe in accordance with all local, state, and federal codes. The Contractor shall support the vent pipe to the exterior pump station wall at intervals as recommended by the pipe manufacturer. Care shall be taken to prevent damage to the existing structures. After removal of the vent pipe, the remaining hole in the wall shall be sealed on the interior of the wall with a galvanized steel plate secured with adhesive anchors, as shown on the contract drawings. The plate material and adhesive anchors shall be as specified in SECTION 02840 - STAFF GAGES. The hole in the wall shall then be filled to the exterior face with nonshrink grout. The grout used shall conform to ASTM C 1107, Grade A, and shall be a commercial formulation suitable for the proposed application. Temporary forms shall be provided to contain the grout until it has set. After removal of the forms, the surface of the grout shall be smoothed off and an additional galvanized cover plate shall be installed with adhesive anchors over the grouted area. The Contractor at no additional expense to the Government shall repair any damage to the existing structures.

3.1.5 Interruption of Utility Service. The Contractor shall notify the Contracting Officer 3 days in advance of any interruption of sewer service.

-- END OF SECTION --



SECTION
Scale: 1/4" = 1'-0"

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NOTES:

- 1) Full adjustable wall bracket, bronzed bushed, stem guide, sized & spaced in accordance with manufacturers requirements.
- 2) Dimension to be determined after equipment is selected.

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Scale: 1/4" = 1'-0"

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SECTION 02840
STAFF GAGES

PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment, and materials necessary to provide staff gages specified herein and as indicated on the drawings.

1.2 REFERENCES. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

ASME B18.2.1-81 (Supple R 1992)	Square and Hex Bolts and Screws (Inch Series)
ASME B18.2.2-87	Square and Hex Nuts (Inch Series)
ASME B18.3-86 (R 1995)	Socket Cap, Shoulder and Set Screws (Inch Series) Including Dimensions of Hexagon and Spline Sockets and Keys to Match
ASME B18.6.2-72 (R 1993)	Slotted Head Cap Screws, Square Head Set Screws, and Slotted Headless Set Screws
ASME B18.6.3-72 (R 1997)	Machine Screws and Machine Screw Nuts
ASME B18.22.1-65 (R 1998)	Plain Washers

1.2.2 American Society for Testing and Materials (ASTM).

ASTM A 53/A 53M	(2001) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A 276	(2002) Stainless Steel Bars and Shapes
ASTM C 881	(1999) Epoxy-Resin-Base Bonding Systems for Concrete
ASTM F 593	(2002) Stainless Steel Bolts, Hex Cap Screws, and Studs
ASTM F 594	(2002) Stainless Steel Nuts

1.3 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION

01300 - SUBMITTAL PROCEDURES:

1.3.1 Drawings.

1.3.1.1 Detail Drawings; FIO. Detail drawings for metalwork shall be submitted prior to fabrication. Detail drawings for metalwork shall include catalog cuts, templates, fabrication and assembly details and type, grade and class of material as appropriate. Elements of fabricated items inadvertently omitted on contract drawings shall be detailed by the fabricator and indicated on the detail drawings.

1.3.1.2 Staff Gages; FIO. Detail drawings and sketches showing final staff gage locations shall be submitted.

1.3.2 Data.

1.3.2.1 Manufacturer's Literature; GA. The Contractor shall submit manufacturer's product literature, including material properties and design load and spacing information and recommendations for adhesive anchor systems.

1.3.2.2 Concrete; GA. The Contractor shall submit all data for concrete used for placement of Type 2 staff gages in accordance with Paragraph 02840-2.2.

1.3.3 Schedules.

1.3.3.1 Materials Orders; FIO. The Contractor shall furnish 2 copies of purchase orders, mill orders, shop orders and work orders for all materials and items used in the work. These copies shall be submitted prior to the use of the materials and items in the work. Where mill tests are required, purchase orders shall contain the test site address and the name of the testing agency.

1.3.3.2 Materials List; GA. Materials list of materials to be used in the fabrication of each item shall be submitted at the time of submittal of detail drawings.

1.3.3.3 Shipping Bill; FIO. The Contractor shall furnish a shipping bill or memorandum of each shipment of finished pieces or members to the project site giving the designation mark and weight of each item, the number of items, the total weight, and the car initial and number if shipped by rail in carload lots.

PART 2 - PRODUCTS

2.1 METAL MATERIALS AND STANDARD ARTICLES. Metal materials and standard metal articles shall conform to the respective specifications and other designated requirements. Sizes shall be as specified or shown. Where material requirements are not specified, materials furnished shall be suitable for the intended use and shall be subject to approval. Where not indicated otherwise, materials shall comply with the following.

2.1.1 Carbon Grade Steel. Unless otherwise indicated, all shapes, plates and bars shall be stainless steel conforming to ASTM A 276, Type 304.

2.1.2 Steel Pipe. Steel Pipe shall conform to ASTM A 53, Type E, Grade B.

2.1.3 Screws. Screws shall be of the material, grade, type, style, and finish indicated or best suited for use intended.

2.1.3.1 Cap Screws. ASME B18.2.1, ASME B18.3, or ASME B18.6.2 as required.

2.1.3.2 Machine Screws. ASME B18.6.3.

2.1.4 Adhesive Anchors. Embedment depths and anchor spacings shall be as shown on the contract drawings. If no embedment depth is given on the contract drawings for a particular location, embedment depth shall be the manufacturer's recommended minimum embedment for the anchor rod and adhesive selected.

2.1.4.1 Threaded Rods, Nuts and Washers. Stainless steel threaded rod material for adhesive anchors shall meet requirements of ASTM F 593, (AISI 304), Condition CW. Ends of rods shall be beveled as recommended by adhesive manufacturer. Stainless steel nut material shall meet requirements of ASTM F 594. Stainless steel washers shall meet dimensional requirements of ANSI B18.22.1, Type A, plain.

2.1.4.2 Adhesive. If adhesive capsules are used, adhesive shall be a vinyl urethane methacrylic resin with a dibenzoyl peroxide hardener. Number of capsules used shall be sufficient to meet manufacturer's recommendations for the required embedment. If bulk adhesive is used, adhesive shall be either an adhesive meeting requirements of ASTM C 881, Type IV, Grade 3, Class A, B, C (except gel times), or a hybrid resin/hardener adhesive specifically intended for use in anchoring materials into solid concrete substrates. Holes for anchors shall be drilled in accordance with manufacturer's recommendations.

2.2 CONCRETE. At the Contractor's option, concrete for Type 2 staff gages may be ready-mixed concrete, or a commercially-available sack mix, suitable for the intended purpose and mixed on-site by the Contractor. If ready-mixed is used, the Contractor shall provide the name and address of the concrete supplier, mix design used and compressive strength. If a sack mix is used, the Contractor shall provide the product name and ingredient data and manufacturer's recommendations for mixing, placing and curing. The proposed option shall be approved by the Contracting Officer prior to placement.

PART 3 - EXECUTION

3.1 GENERAL FABRICATION REQUIREMENTS.

3.1.1 Structural Fabrication. Material must be straight before being laid off or worked. If straightening is necessary it shall be done by methods

that will not impair the metal. Sharp kinks or bends shall be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Where heating is required, precautions shall be taken to avoid overheating the metal and it shall be allowed to cool in a manner that will not impair the original properties of the metal. Proposed flame cutting of material other than structural steel shall be subject to approval and shall be indicated on detail drawings. Shearing shall be accurate and all portions of the work shall be neatly finished. Corners shall be square and true unless otherwise shown. Re-entrant cuts shall be filleted to a minimum radius of 3/4 inch unless otherwise approved. Finished members shall be free of twists, bends and open joints. Bolts, nuts and screws shall be tight.

3.1.2 Dimensional Tolerances for Structural Work. Dimensions shall be measured by an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit shall be within the tolerances indicated on the drawings or as specified in the particular section of these specifications for the item of work. Where tolerances are not specified in other sections of these specifications or shown, an allowable variation of 1/32 inch is permissible in the overall length of component members with both ends milled and component members without milled ends shall not deviate from the dimensions shown by not more than 1/16 inch for members 30 feet or less in length and by more than 1/8 inch for members over 30 feet in length.

3.1.3 Structural Steel Fabrication. Structural steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Hand-guided cuts which are to be exposed or visible shall be chipped, ground or machined to sound metal.

3.2 STAFF GAGE FABRICATION. Materials for staff gages shall conform to applicable provisions as indicated herein. Details of staff gages are as shown on the drawings.

3.2.1 Type 1 Staff Gages. Each Type 1 staff gage and reference plate shall consist of a stainless steel plate, of the dimensions shown on the drawings, with porcelain enameled gage sections fastened to the steel. The raised steel marker bars on the staff gages and reference plates shall be installed at the locations shown on the contract drawings. Marker bars may be welded or screwed to the stainless steel plates or angles at the Contractor's option. If screws are used they shall be stainless steel. If the marker bars are welded, the welds shall not distort the base plate or obstruct installation of the enameled gage plates.

3.2.2 Type 2 Staff Gages. Each Type 2 staff gage shall consist of a stainless steel tee, with porcelain enameled gage sections fastened to the steel. The tee section shall be mounted inside a standard weight Type B steel pipe conforming to ASTM A 53. The tee section shall have a flange width of five inches and shall have an overall depth that allows it to fit inside the

pipe without touching the interior surface of the pipe. The tee web may be cut to fit inside the pipe. The minimum thickness of both flange and web shall be 1/3 inch. The pipe shall be installed in the ground as shown on the drawings. All pipe shall be galvanized.

3.2.3 Type 3 Staff Gages. Each Type 3 staff gage shall consist of a galvanized stainless steel angle having eight-inch-long, 1/2-inch-thick legs, with porcelain enameled gage sections fastened to the angle. The raised steel marker bars on the staff gages shall be installed at the locations shown on the contract drawings. Marker bars may be welded or screwed to the stainless steel plates or angles at the Contractor's option. If screws are used they shall be stainless steel. If the marker bars are welded, the welds shall not distort the base plate or obstruct installation of the enameled gage plates.

3.2.4 NGVD Elevation Reference Plates. Additional enameled plates labeled for specific elevations shall be prepared as described on the contract drawings and installed adjacent to and similarly to the Type 1 gages.

3.3 STAFF GAGE INSTALLATION.

3.3.1 General. Staff gages shall be installed after, in the opinion of the Contracting Officer, all work that could damage the gages has been completed. Gages shall be installed on a true vertical line. Gages shall be installed at the recommended locations for the staff gages as shown on the drawings at the end of this section.

3.3.2 Types 1 and 3 Staff Gages. The stainless steel plates or angles and porcelain gage sections shall be installed at the locations shown on the drawings. Mounting details shall be as shown on the drawings.

3.3.3 Type 2 Staff Gages.

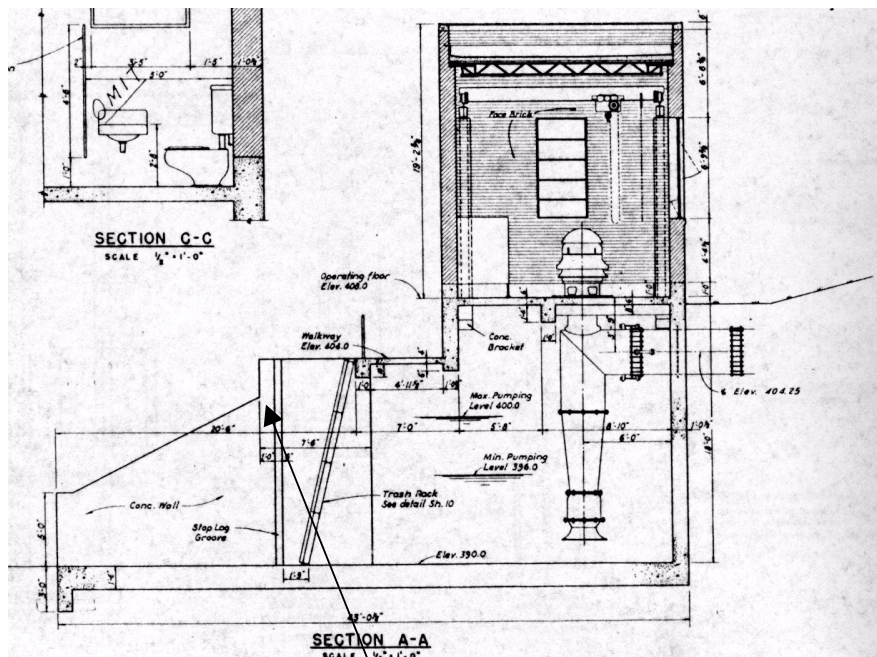
3.3.3.1 Excavation. Excavation for staff gage post holes shall be of the dimensions shown on the drawings. Post holes shall be cleared of loose material. Waste material shall be spread where directed or removed from the site.

3.3.3.2 Pipes. The 6-inch by 4-feet long standard pipe sleeves for Type 2 staff gages shall be installed in a vertical position in concrete footings as shown on the drawings.

3.3.3.3 Staff Gages. The top of each gage shall be set at the elevations shown on the drawing. The tee shall be set to grade in the pipe sleeve with concrete as detailed on the drawings. The staff gages shall be installed at the locations shown on the drawings.

xxx

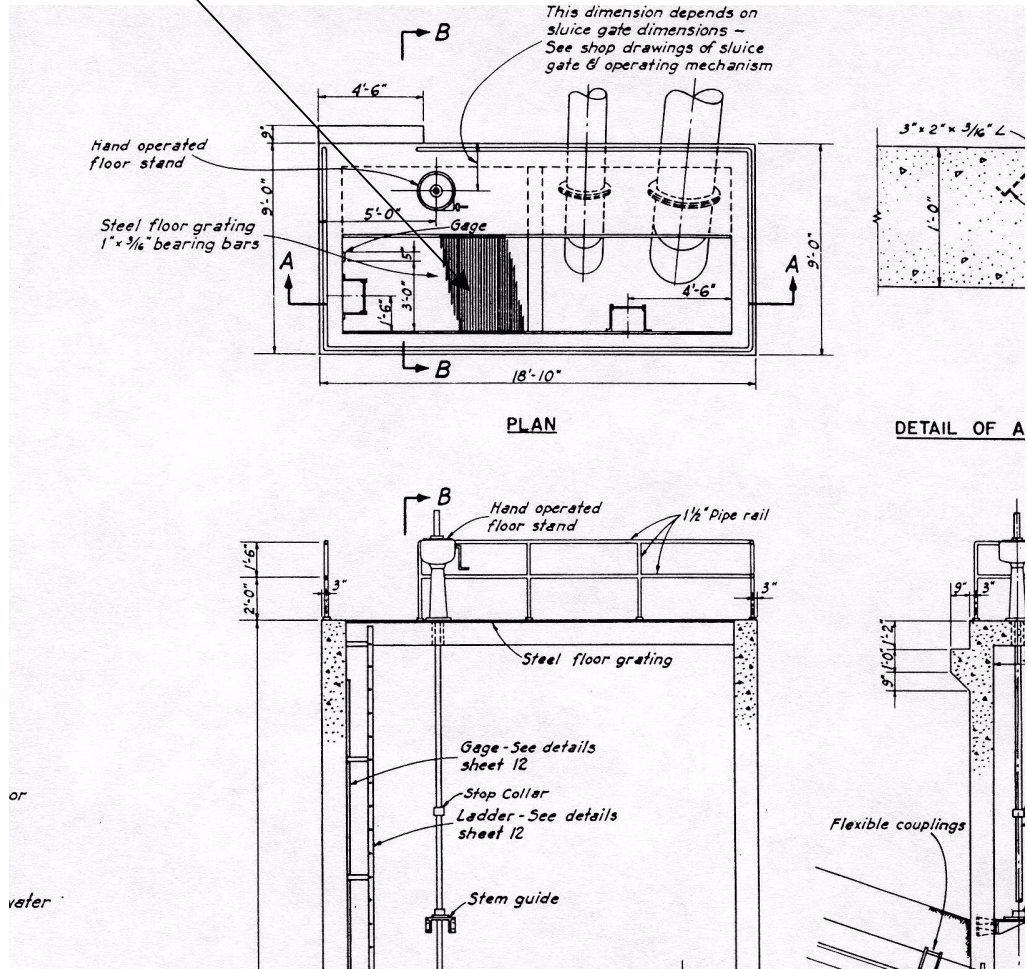
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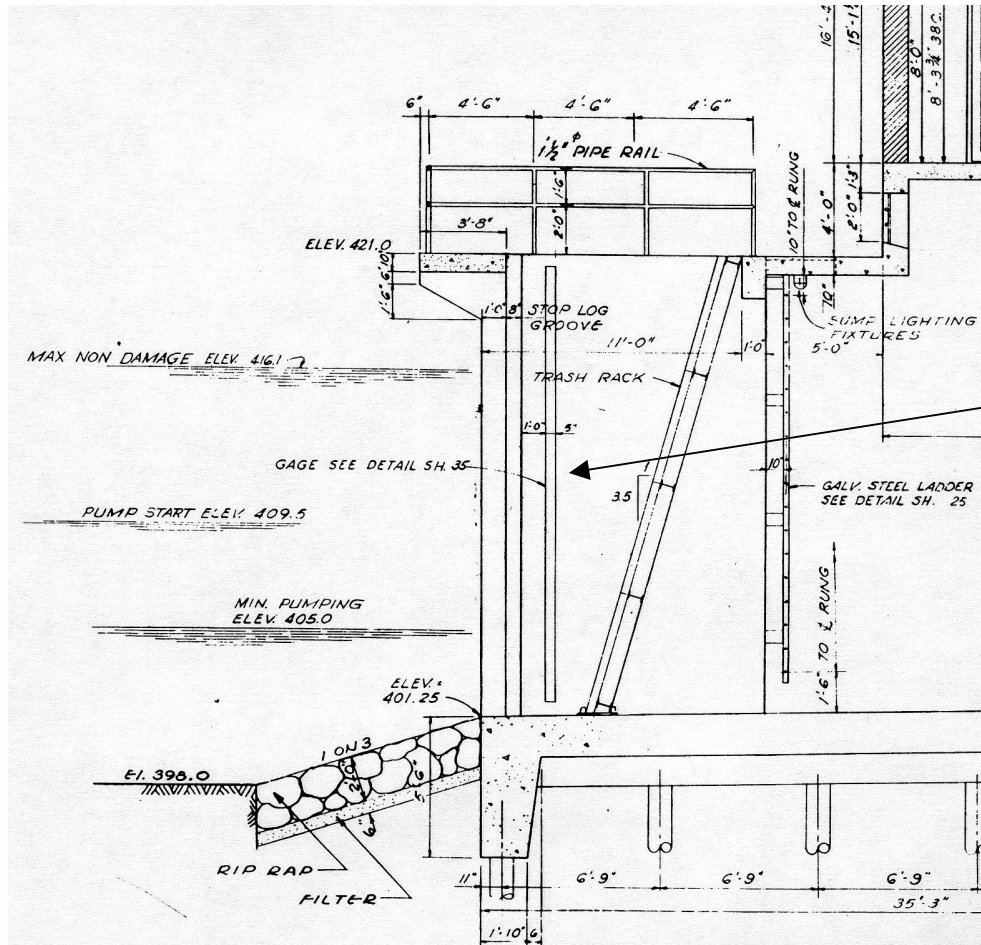
Install new staff gage and NGVD elevation reference plates in this area. (Note: Use this section rather than Section A-A on Reference Drawing in Plans for concrete profile at top of wall.)

Cahokia Pumping Station
Land Side Type 1 Staff Gage
Detail from Reference Drawing 326.1423
Not to Scale

Install new staff gage adjacent to location of existing staff gage.

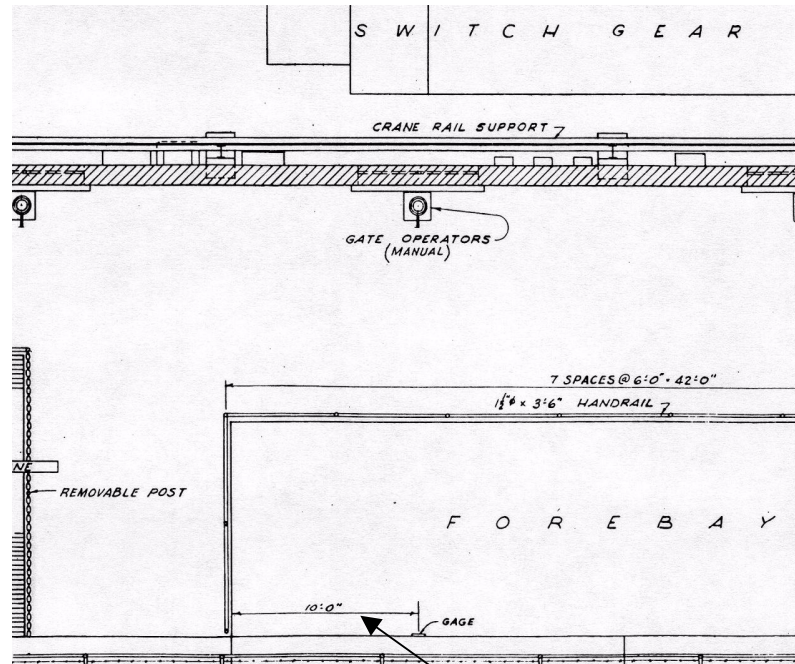


Cahokia Pumping Station
River Side Type 1 Staff Gage
Detail from Reference Drawing 326.1426
Not to Scale



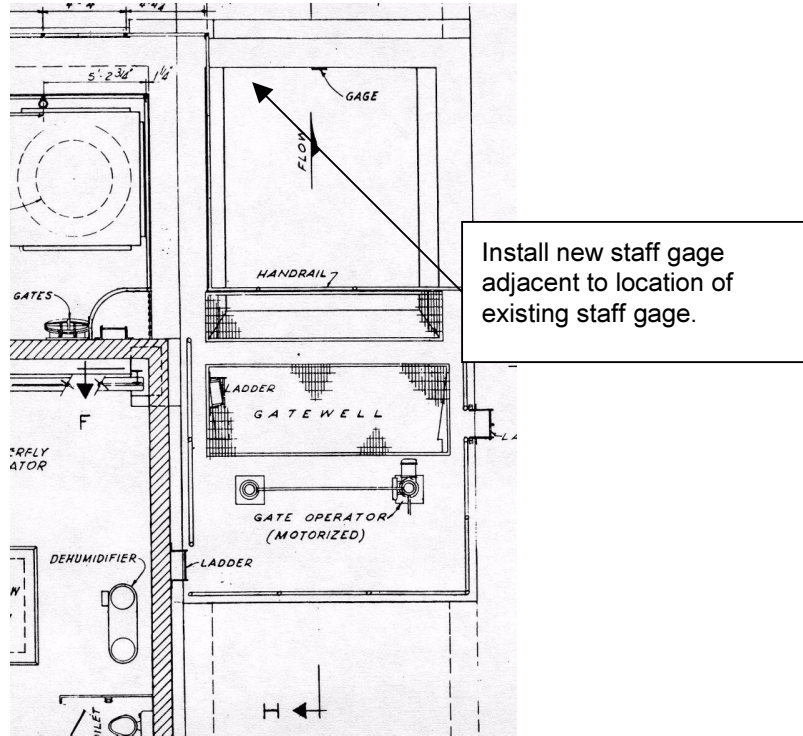
Install new staff gage and NGVD elevation reference plates adjacent to location of existing staff gage.

Canal No. 1 Pumping Station
Land Side Type 1 Staff Gage
Detail from Reference Drawing 327.1472
Not to Scale

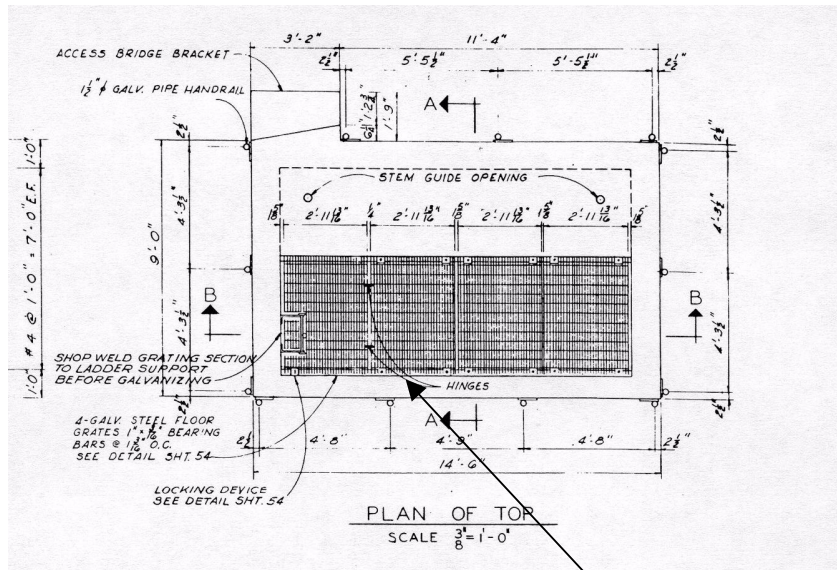


Install new staff gage and NGVD elevation reference plates adjacent to location of existing staff gage.

East St. Louis Pumping Station
 Land Side Type 1 Staff Gage
 Detail from Reference Drawing 326.14101
 Not to Scale

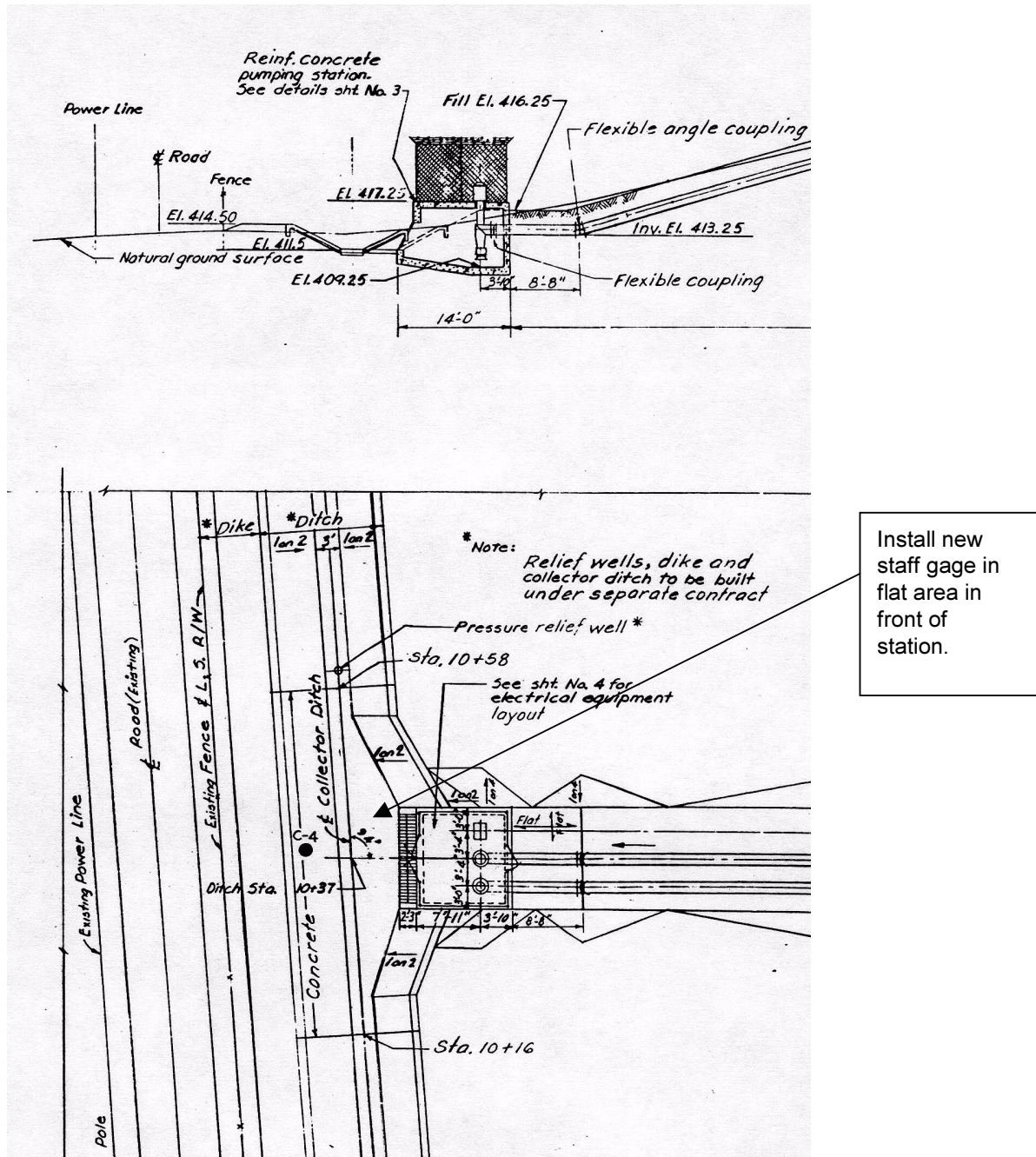


East St. Louis Pumping Station
 River Side Type 1 Staff Gage – Discharge Chamber
 Detail from Reference Drawing 326.14101
 Not to Scale

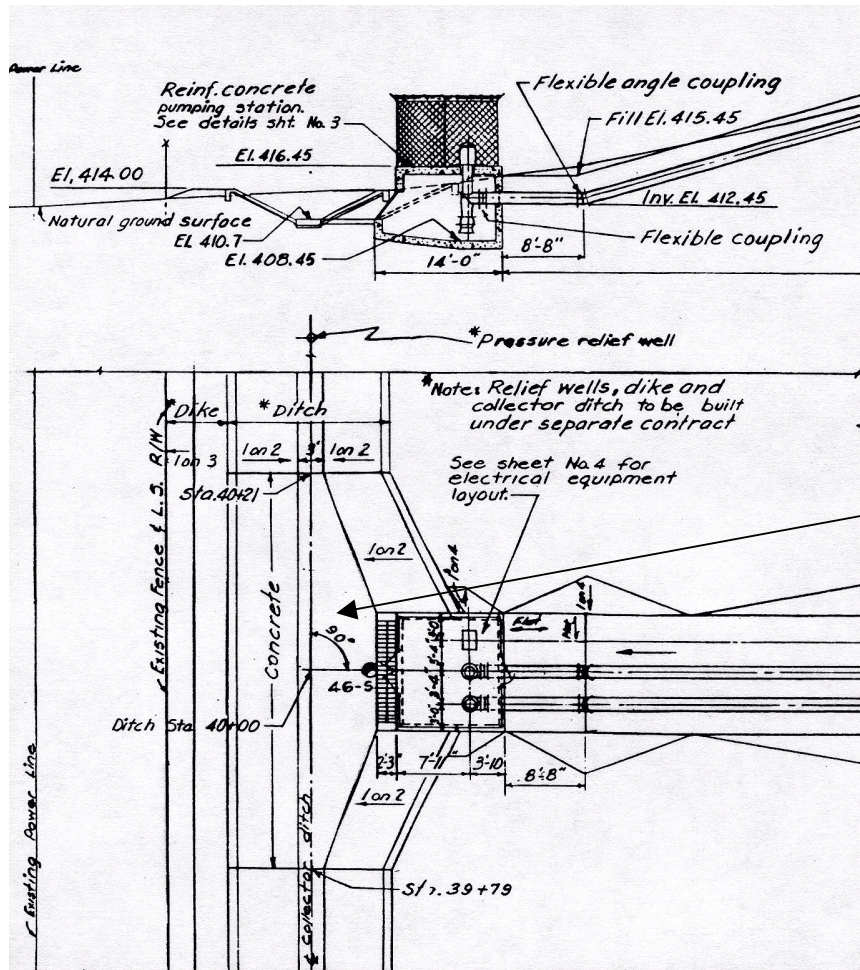


Install new staff gage in
a location visible from
the top of the slab.

East St. Louis Pumping Station
River Side Type 1 Staff Gage – Emergency Closure Structure
Detail from Reference Drawing 326.14142
Not to Scale

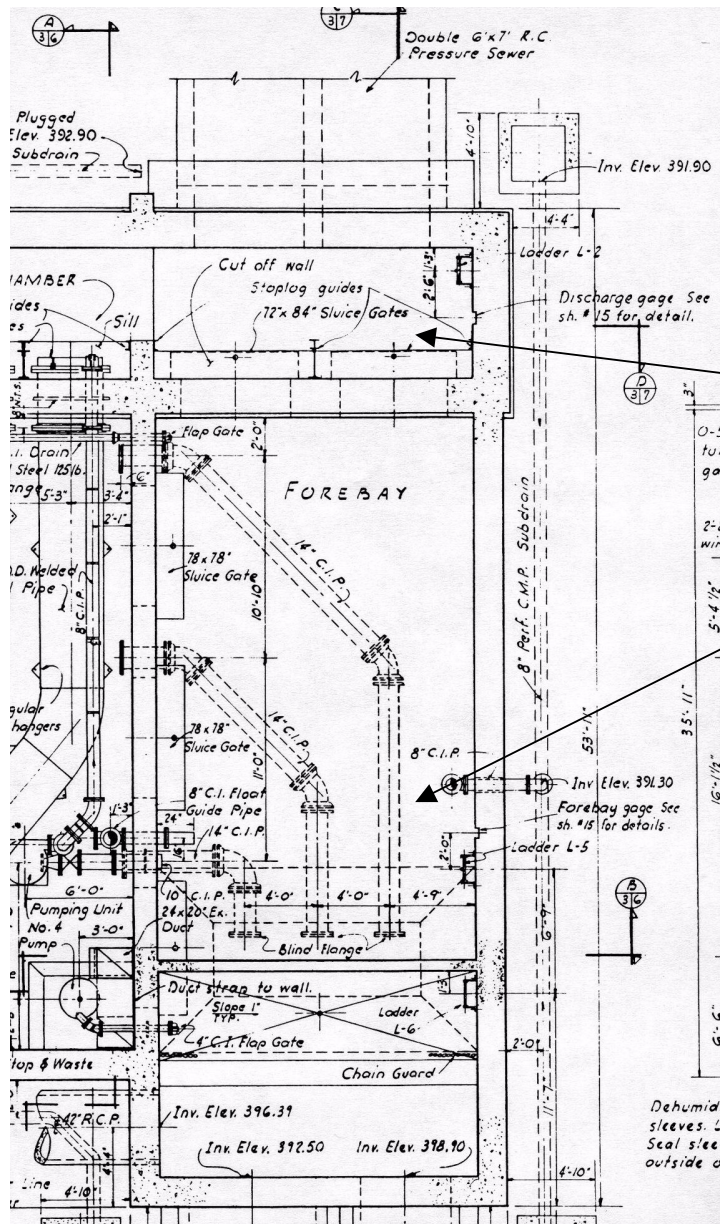


Granite City No. 1 Pumping Station
 Land Side Type 2 Staff Gage
 Detail from Reference Drawing 329.1423
 Not to Scale



Install new staff gage in flat area in front of station.

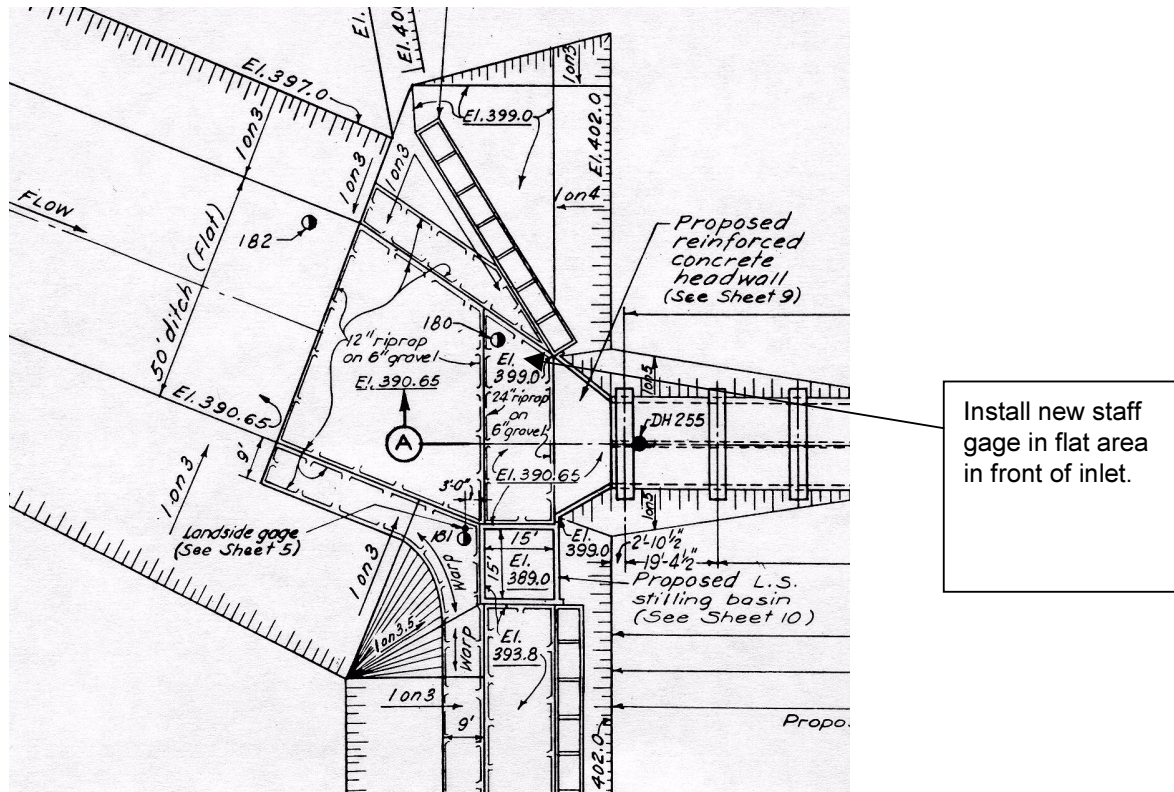
Granite City No. 2 Pumping Station
 Land Side Type 2 Staff Gage
 Detail from Reference Drawing 329.1424
 Not to Scale



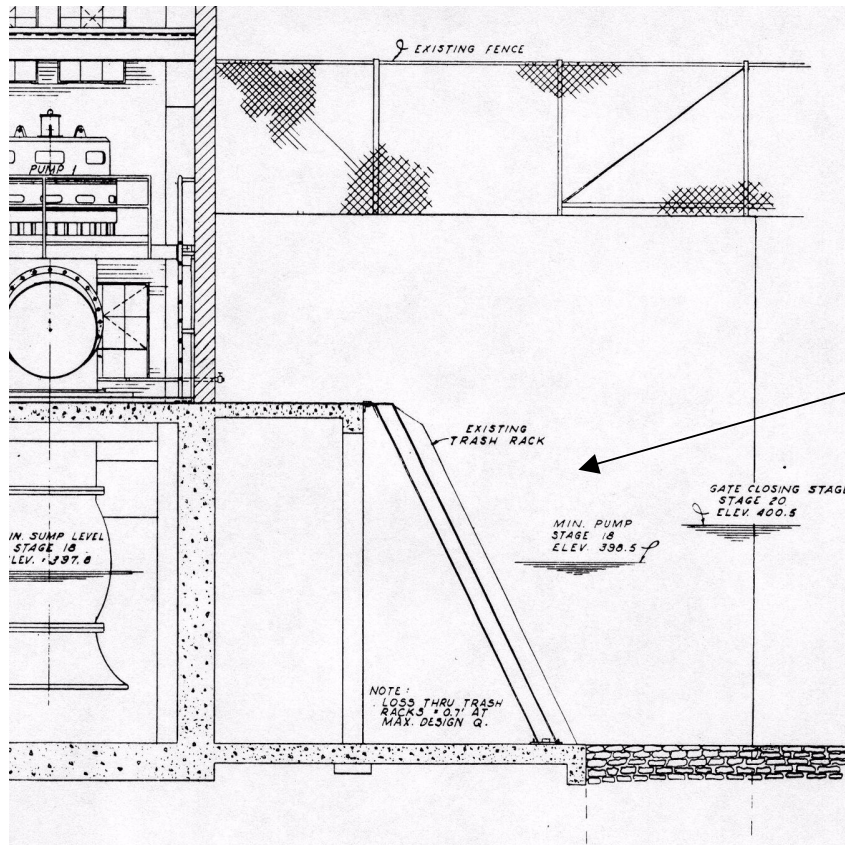
Install new river side staff gage adjacent to location of existing staff gage.

Install new land side staff gage and NGVD elevation reference plates adjacent to location of existing staff gage.

Madison Pumping Station
 Land Side and River Side Type 1 Staff Gages
 Detail from Reference Drawing 325.14196
 Not to Scale

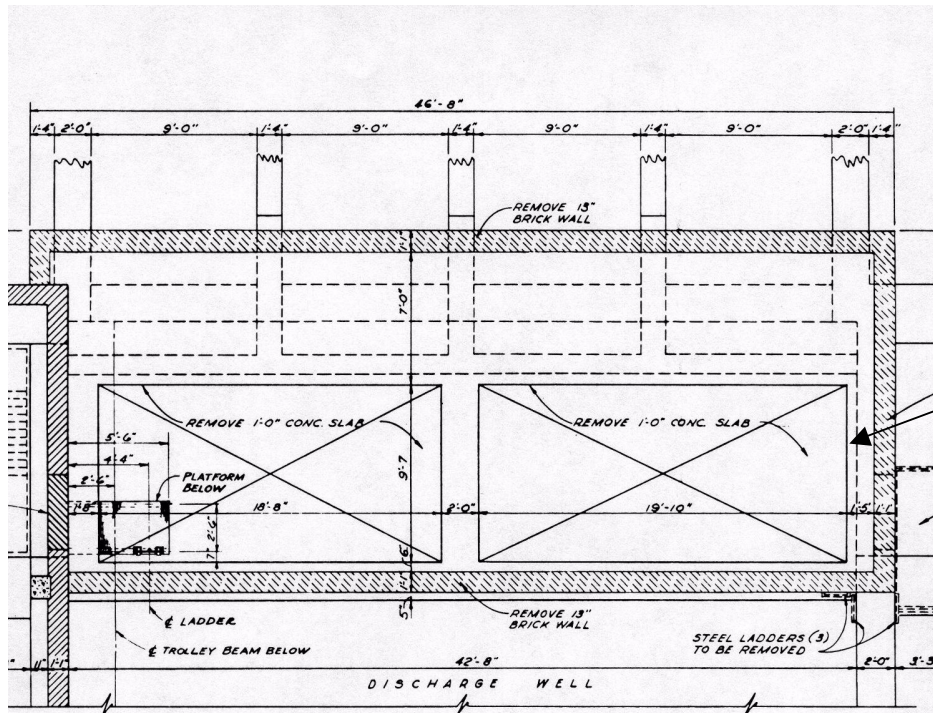


MoPac Gravity Drain
 Land Side Type 2 Staff Gage
 Detail from Reference Drawing 327.1414
 Not to Scale

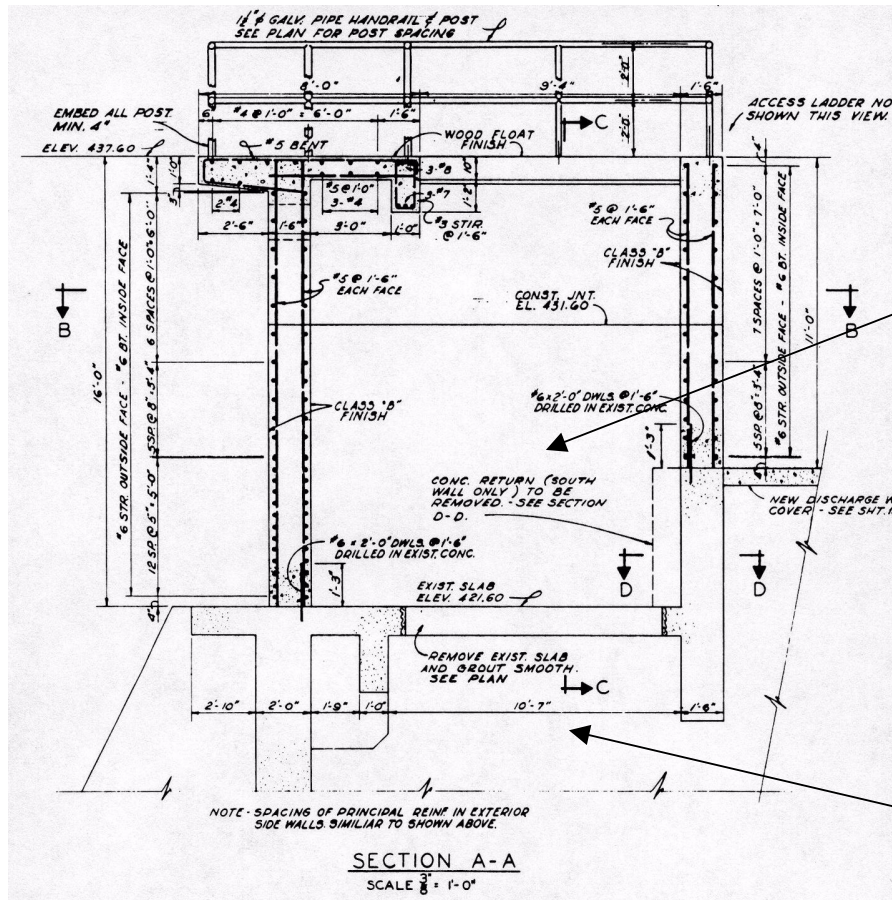


Install new staff
gage and NGVD
elevation reference
plates in this area.

North Pumping Station
Land Side Type 1 Staff Gage
Detail from Reference Drawing 325.14154
Not to Scale



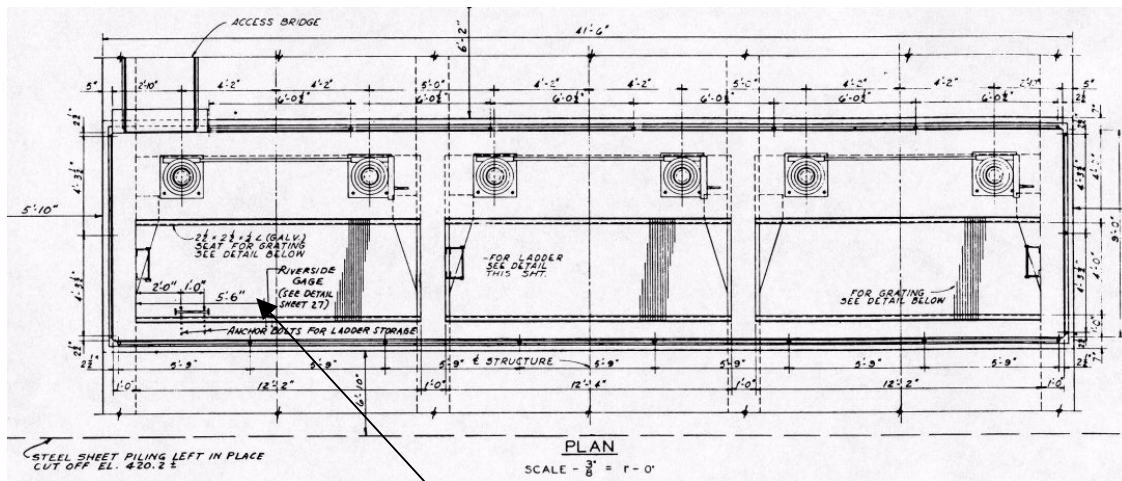
North Pumping Station
 River Side Type 1 Staff Gage – Discharge Chamber
 Detail from Reference Drawing 325.14161
 Not to Scale



Install upper
staff gage in
this area.

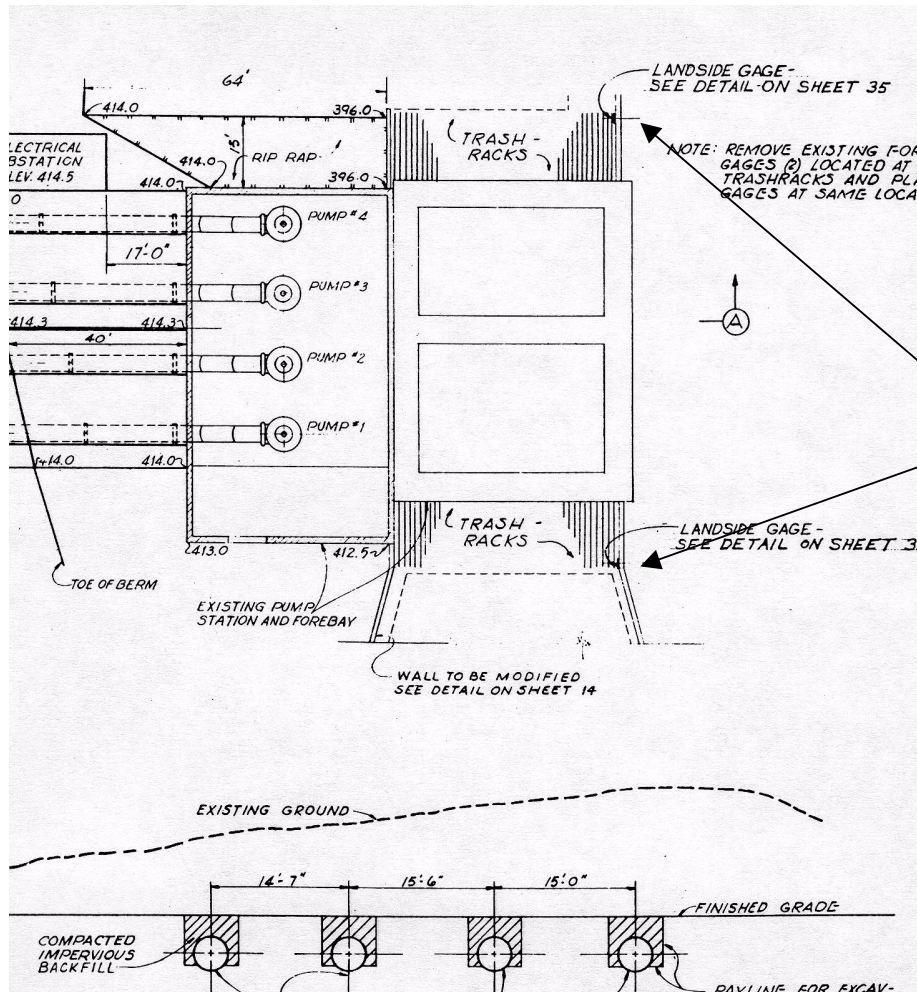
Install lower staff
gage in this area,
below upper staff
gage.

North Pumping Station
River Side Type 1 Staff Gage – Discharge Chamber
Detail from Reference Drawing 325.14161
Not to Scale



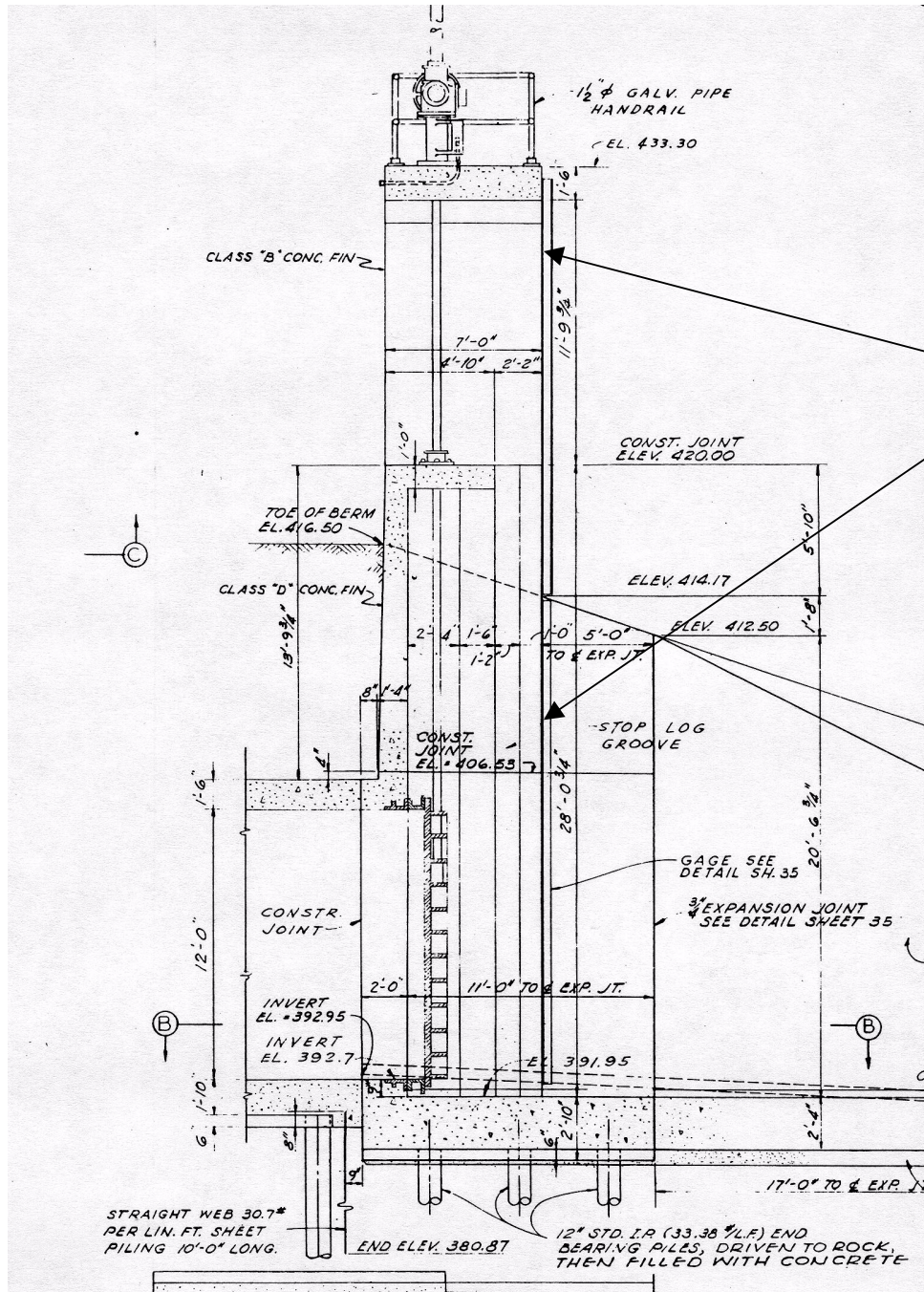
Install new staff gage adjacent to location of existing staff gage.

North Pumping Station
 River Side Type 1 Staff Gage – Emergency Closure Structure
 Detail from Reference Drawing 325.14172
 Not to Scale

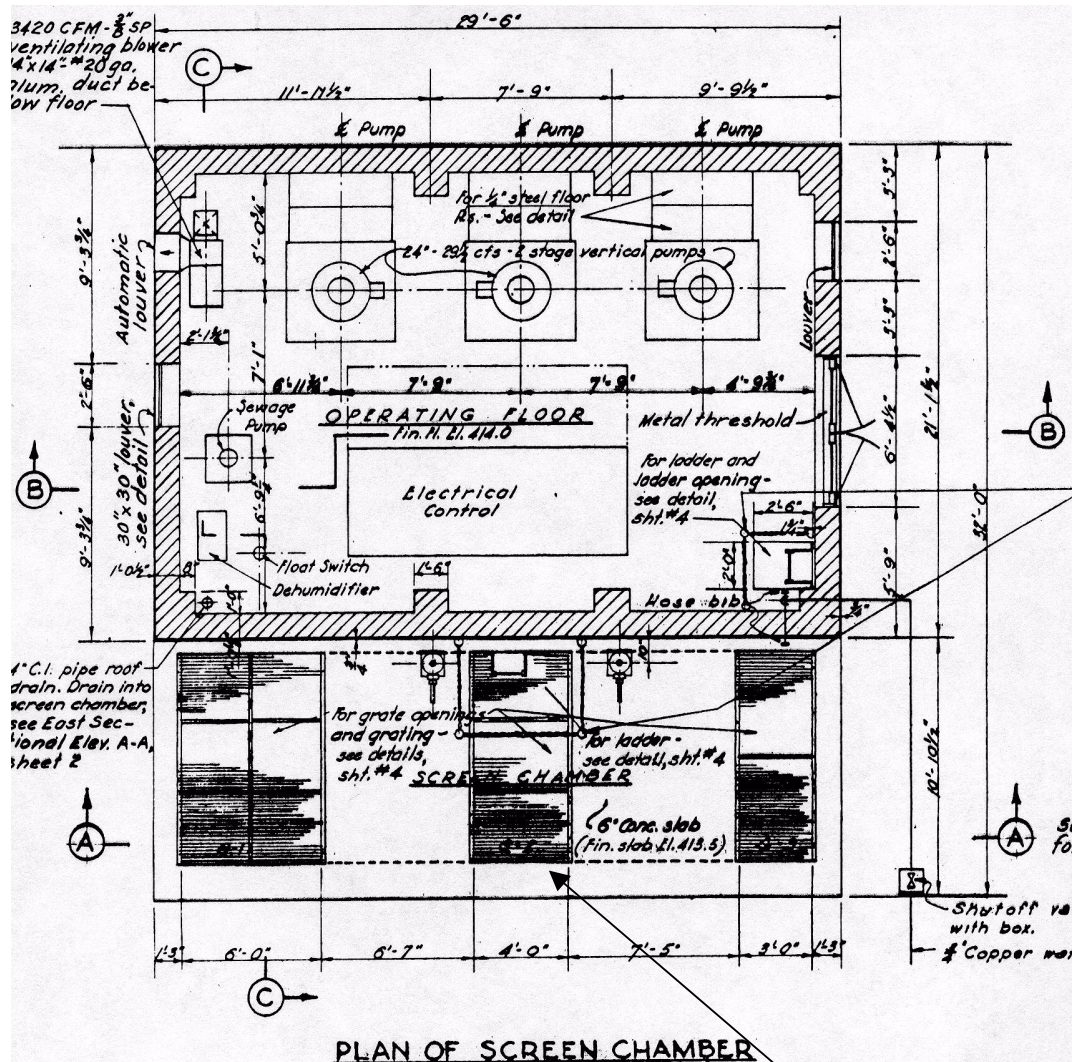


Install new staff
 gages and NGVD
 elevation
 reference plates
 adjacent to
 locations of
 existing staff
 gages.

South Pumping Station
 Land Side Type 1 Staff Gages
 Detail from Reference Drawing 327.1462
 Not to Scale



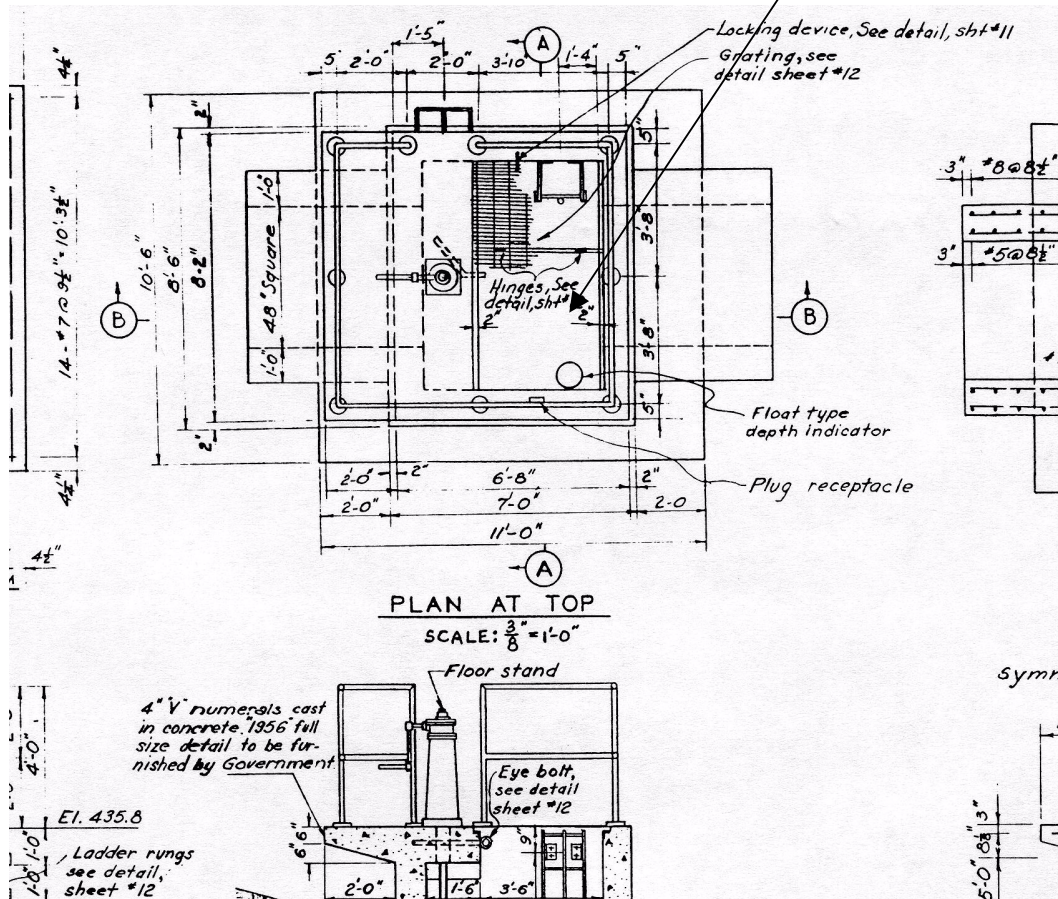
South Pumping Station
River Side Type 1 and Type 3 Staff Gages
Detail from Reference Drawing 327.1467
Not to Scale



Install new staff gage and NGVD elevation reference plates in a location in the screen chamber visible from the slab over the chamber.

Venice Pumping Station
Land Side Type 1 Staff Gage
Detail from Reference Drawing 325.1496
Not to Scale

Install new staff gage in location visible from grating/platform.



Venice Pumping Station
River Side Type 1 Staff Gage
Detail from Reference Drawing 325.14103
Not to Scale

05500.11

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2.1 MATERIALS	05500-2
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SECTION 05500
DISCHARGE CHAMBER ROOF SLAB JOINT REPAIRS - NORTH PUMP STATION

PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment, and materials necessary to make repairs to the joint around the discharge chamber roof slab at North Pumping Station.

1.2 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 - SUBMITTAL PROCEDURES:

1.2.1 Data. Manufacturer's Literature; GA. The Contractor shall submit manufacturer's product literature, including material properties and design information and recommendations, for joint sealant, rubber and foam products, and concrete anchors. Manufacturer's data for concrete anchors shall include ultimate and/or allowable load information for shear and tension and spacing and edge distance requirements and substrate strengths for achieving the allowable loads.

1.2.3 Samples.

1.2.3.1 Rubber Samples; GA. The Contractor shall submit samples of the rubber joint filler material to be used.

1.2.3.2 Foam Samples; GA. The Contractor shall submit samples of the foam joint cover material to be used.

1.2.3 Schedules.

1.2.3.1 Materials Orders, FIO. The Contractor shall furnish 2 copies of purchase orders, mill orders, shop orders and work orders for all materials and items used in the work. These copies shall be submitted prior to the use of the materials and items in the work. Where mill tests are required, purchase orders shall contain the test site address and the name of the testing agency.

1.2.3.2 Shipping Bill; FIO. The Contractor shall furnish a shipping bill or memorandum of each shipment of finished pieces or members to the project site giving the designation mark and weight of each item, the number of items, the total weight, and the car initial and number if shipped by rail in carload lots.

1.3 REFERENCES. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.3.1 American Society for Testing and Materials (ASTM).

ASTM A 276	(2002) Stainless Steel Bars and Shapes
ASTM D 2000	(2001) Standard Classification System for Rubber Products in Automotive Applications
ASTM C 920	(2002) Elastomeric Joint Sealants

PART 2 - PRODUCTS

2.1 MATERIALS. Materials shall conform to the respective specifications and other designated requirements. Sizes shall be as specified or shown. Where material requirements are not specified, materials furnished shall be suitable for the intended use and shall be subject to approval. Where not indicated otherwise, materials shall comply with the following.

2.1.1 Rubber Seal. Rubber shall be neoprene conforming to ASTM D 2000, Type BC, and shall have a hardness of 30 durometers on the Shore A scale. Seals shall be cut to fit the joint opening width from one-inch-thick stock.

2.1.2 Joint Sealant. Polyurethane elastomeric sealant shall conform to ASTM C 920, Type M, Grade P, Class 25.

2.1.3 Foam Filler. Foam filler strips shall be closed-cell silicone foam rubber, resistant to temperature extremes, sunlight and ozone. If the foam rubber is adhesive backed, the adhesive side shall face the steel cover plates. Foam filler shall be of a firmness that can be securely compressed when the cover plates are secured and can conform to the surface profile of the filled joint.

2.1.4 Cover Plates. Cover plates shall be stainless steel conforming to ASTM A 276, Type 304.

2.1.5 Concrete Anchors. Concrete anchors shall Kwik-Con II+ concrete and masonry screw anchors manufactured by Hilti, Inc., The anchors shall be stainless steel, with hex heads, of the diameter shown on the drawings and of length to provide the minimum embedment depth shown on the drawings.

PART 3 - EXECUTION

3.1 STEEL FABRICATION

3.1.1 Structural Fabrication. Material must be straight before being laid off or worked. If straightening is necessary it shall be done by methods that will not impair the metal. Sharp kinks or bends shall be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Where heating is required, precautions shall be taken to avoid overheating the metal and it shall be allowed to cool in a manner that will not impair the original properties of the metal. Shearing shall be accurate and all portions of the work shall be neatly finished. Corners shall be square and true unless

otherwise shown. Re-entrant cuts shall be filleted to a minimum radius of 3/4 inch unless otherwise approved. Finished members shall be free of twists, bends and open joints. Bolts, nuts and screws shall be tight.

3.1.1.1 Dimensional Tolerances for Structural Work. Dimensions shall be measured by an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit shall be within the tolerances indicated on the drawings or as specified in the particular section of these specifications for the item of work. Where tolerances are not specified in other sections of these specifications or shown, an allowable variation of 1/32 inch is permissible in the overall length of component members with both ends milled and component members without milled ends shall not deviate from the dimensions shown by not more than 1/16 inch for members 30 feet or less in length and by more than 1/8 inch for members over 30 feet in length.

3.1.1.2 Structural Steel Fabrication. Structural steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Surfaces and edges to be welded shall be prepared in accordance with AWS D1.1, Subsection 3.2. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Hand-guided cuts which are to be exposed or visible shall be chipped, ground or machined to sound metal.

3.1.2 Field-fitting of Cover Plates. Because of localized irregularities in the interface of the roof slab with the adjacent walls, field-fitting of the cover plates will be required. Areas affected include, but are not limited to, the southeast corner of the roof slab where it meets the walls and the curb along the north edge of the slab where it is penetrated by the pump vent pipes. At all locations, cover plates shall be cut to fit the overall joint width as measured at the at the elevation of the top of the slab. Cover plates shall be cut to manageable lengths suiting the field conditions as directed by the Contracting Officer. Lengths of cover plates shall be adjusted where necessary to account for abrupt concrete surface irregularities. Measurements of required cover plate widths shall be made in the field by the Contractor prior to fabrication and installation. Plates may be trimmed slightly where necessary to clear the base flanges of the existing steel guardrail along the south edge of the roof slab and the pump vent pipes passing through the curb on the north edge of the roof. Holes for the concrete anchors shall be predrilled in the cover plates to the spacings shown on the contract drawings. Fabricated plates shall be marked to indicate the location/sequence in which they are to be installed.

3.2 JOINT REPAIRS

3.2.1 Joint Preparation. All dirt, vegetative matter, and debris, shall be removed from the roof slab joints on the north, east, and south sides of the discharge chamber as indicated on the contract drawings. Existing joint sealant shall be removed from the joints at these locations. Where existing joint filler is severely damaged or deteriorated, it shall be removed

at the direction of the Contracting Officer. Removed materials shall be discarded off-site by the Contractor. After removal of damaged materials, the resulting joint recesses shall be cleaned of all dirt, dust and debris.

3.2.2 Filler Installation. Neoprene joint filler shall be installed at locations where existing joint filler is missing or severely deteriorated or has previously been removed. Seals shall be cut to width to fit snugly at each location and shall have an installed depth of one inch. Seal shall be inserted into place with round-ended instruments approved by the Contracting Officer that do not cut, tear or puncture the rubber. Where discontinuities occur, each succeeding segment of filler shall be butted snugly against the previous segment of filler. To ensure contact, succeeding segments of rubber filler may be joined into a continuous length with an appropriate adhesive suitable for the purpose as recommended by the rubber manufacturer.

3.2.3 Joint Sealant. Elastomeric joint sealant shall be mixed and installed according to manufacturer's recommendations. Where recommended by the sealant manufacturer, to prevent any possible reaction between the neoprene filler and the joint sealant, a backer material isolating the filler from the sealant shall be used and the installation depth of the neoprene filler adjusted accordingly. Joint sealant shall completely fill the joint to the level of the top of the discharge chamber roof slab. Sealant shall be tooled to a slightly convex surface.

3.2.4 Silicone Foam Filler. Filler shall be placed in position over the completed joint and secured in a non-damaging manner so that it does not shift during tightening of the concrete anchors.

3.2.5 Concrete Anchors. Anchor locations shall be prepared and anchor holes drilled to the recommended depths for the required embedments in accordance with the anchor manufacturer's guidelines. The prepared cover plates shall be used as templates for marking the corresponding anchor installation locations. Anchors shall be installed in accordance with manufacturer's recommendations.

3.2.4 Cover Plates. Cover plates shall be installed over the joint and foam filler with the concrete anchors. Anchors shall be installed according to manufacturer's recommendations. Tightening of the anchors shall cause compression of the foam filler over the joint to conform to the profile of the filled joint.

xxx

15100.11

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SECTION 15100
PUMP REHABILITATION - NORTH PUMP STATION

PART 1 GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, materials, and equipment required for disassembly, removal, equipment, rehabilitation, installation of specified new parts, reassembly, reinstallation, and testing the Fairbanks Morse Type 6360 vertical deep well pumps presently installed in the North Pump Station as shown on the reference drawings and as specified herein.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all manufacturing, fabrication, and installation operations to assure compliance with the contract requirements and maintain records of its quality control for all construction operations, including but not limited to the following:

- (1) Shop welding, machine work and fabrication.
- (2) Shop disassembly and inspection of existing parts.
- (3) Shop inspection records, including dimensions and measurement readings.
- (4) Use of specified materials, including material certification records from suppliers.
- (5) Shop assembly and tests.
- (6) Preparation for shipment and storage.
- (7) Inspection at the worksite for damage to and defects in material and equipment.
- (9) Field installation and tests.

1.2.2 Reporting. A copy of these records of inspections and tests, as well as the records of corrective action taken, shall be furnished to the Government daily during operations at the pump station or at the pump rehabilitation firm.

1.3 REFERENCES. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto.

1.3.1 American Society For Nondestructive Testing (ASNT).

CP-189-91	Qualification and Certification of Nondestructive Testing Personnel
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1.3.2 American National Standards Institute (ANSI).

B 4.1-67 (R 1994)	Preferred Limits and Fits for Cylindrical Parts
----------------------	--

B 46.1-95	Surface Texture (Surface Roughness, Waviness, and Lay)
-----------	---

1.3.3 American Society of Mechanical Engineers (ASME).

ASME SEC IX-98	Boiler and Pressure Vessel Code, Welding and Brazing Procedures, Welders Brazers, and Welding and Brazing Operators
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1.3.4 American Society for Testing and Materials (ASTM).

A 276-94	Stainless and Heat-Resisting Steel Bars and Shapes
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A 388-95	Practice for Ultrasonic Examination of Heavy Steel Forgings
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B 98-98	Copper-Silicon Alloy Rod, Bar, and Shapes
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B 148-97	Aluminum-Bronze Sand Castings
----------	-------------------------------

E 165-95	Test Method for Liquid Penetrant Examination
----------	--

F 467-98	Nonferrous Nuts for General Use
----------	---------------------------------

F 593-98	Stainless Steel Bolts, Hex Cap Screws, and Studs
----------	---

1.3.5 IRD Mechanalysis, Inc. (IRDMI).

General Machinery Vibration Severity Chart (Form No. 305D)	
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1.3.6 American Welding Society (AWS).

D 1.1-98	Structural Welding Code Steel
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1.3.7 Society for Protective Coatings (SSPC).

Paint 16-91	Coal Tar Epoxy-Polyamide Black (or Dark Red) Paint
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1.4 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES.

1.4.1 Shop Drawings. GA. The Contractor shall furnish complete shop drawings, including catalog cuts and such other descriptive data as may be required to demonstrate contract compliance. Shop drawings shall be furnished in a single transmittal in order to demonstrate that the items of equipment have been properly coordinated and will function properly with each other. Shop drawings shall be furnished for each of the bearings being replaced, the new pump shafts and the new solenoid oilers. If departure from these specifications is deemed necessary by the Contractor, details of such departure, including changes in related portions of the project and reasons therefore, shall be submitted with the shop drawings. Approved departures shall be made at no additional cost to the Government.

1.4.2 Field Service Representative Resume. GA. Submit a resume for each erection engineer to be used a minimum of 30 days prior to removal of the pumps for rehabilitation.

1.4.3 Disassembly/Removal Plan. GA. The Contractor shall submit a complete plan for disassembly and removal of the pumps. The disassembly plan shall be complete with drawings, descriptions and computations and shall indicate any required supports, shoring, structural modifications or equipment needed to remove the pumping units. The plan shall also indicate the approval of the disassembly/removal plan from the pump service organization performing the pump rehabilitation.

1.4.4 Additional Pump Repairs. FIO. The Contractor shall submit a list of recommended repairs to the pumps in addition to those specified.

1.5. MATERIALS AND WORKMANSHIP.

1.5.1 General. All materials shall conform to the requirements specified herein. The classification and grade of material incorporated in the work shall be in accordance with the specifications designated herein. If the Contractor desires for any reason to deviate from the designated specifications, complete specifications for the proposed materials shall, after award, be submitted to the Contracting Officer for approval. Reference to any equipment, article or catalog number shall not be construed as limiting competition but only as establishing a standard of quality.

1.5.1.1 The Contractor shall submit to the Contracting Officer for approval, the names of the manufacturers of all machinery and other equipment which it contemplates incorporating in the work, together with performance capacities and other relevant information pertaining to the equipment. Samples of materials shall be submitted for approval when so directed. Equipment, materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

1.5.2 Lists of Materials. The Contractor shall furnish the Contracting Officer with two copies of all purchase orders, mill orders, shop orders for materials, and work orders, including all orders placed or extended by each supplier. The Contractor shall at the time of submittal of drawings furnish a list designating the materials to be used for each item.

1.5.3 Metalwork Fabrication. Flame cutting of material other than steel shall be subject to approval of the Contracting Officer. Shearing shall be accurately accomplished, and all portions of the work neatly finished. Steel may be cut by mechanically guided or hand guided torches provided an accurate profile with a smooth surface free from cracks and notches is secured. Surfaces and edges to be welded shall be prepared in accordance with Section 3 of AWS D 1.1. Chipping and/or grinding will not be required except where specified and as necessary to remove slag and sharp edges of mechanically guided or hand guided cuts not exposed to view. Visible or exposed hand guided cuts shall be chipped, ground or machined to sound metal.

1.5.4 Machine Work.

1.5.4.1 All tolerances, allowances and gages for metal fits between plain, nonthreaded cylindrical parts shall conform to ANSI B 4.1, for the class of fit required.

1.5.4.2 Where surface finishes are indicated on the contract or Contractor's drawings or specified herein, the symbols used or finishes specified shall be in accordance with ANSI B 46.1. Values of roughness height specified are the arithmetical average deviation expressed in micro inches. Roughness specified is the maximum value and any lesser degree will be satisfactory unless otherwise called for on the drawings. Compliance with specified surface shall be determined by sense of feel and by visual inspection of the work compared to Roughness Comparison Specimens, in accordance with the provisions of ANSI B 46.1. Value of roughness width and waviness height are not specified, but shall be consistent with the general type of finish specified by roughness height. Flaws such as scratches, ridges, holes, peaks, cracks or checks which will make the part unsuitable for the intended use will be cause for rejection.

1.5.4.3 So far as practicable, all work shall be laid out to secure proper matching of adjoining unfinished surfaces. Where there is a large discrepancy between adjoining unfinished surfaces, they shall be chipped and ground smooth, or machined, to secure proper alignment. Unfinished surfaces shall be true to the lines and dimensions shown on the contract or Contractor's drawings and shall be chipped or ground free of all projections and rough spots. Depressions or holes not affecting the strength or usefulness of the parts shall be filled in a manner approved by the Contracting Officer.

1.5.4.4 Care shall be exercised to assure that correct alignment of wetted surfaces being joined by a flanged joint is being obtained. Where plates of the water passage change thickness, the transition shall occur on the outer surface leaving the inner surface, properly aligned. When the

welding has been completed and the welds have been cleaned, but prior to stress relieving, the joining of all plates shall be carefully checked in the presence of the Contracting Officer for misalignment of adjoining parts.

1.5.4.5 Pin holes shall be bored true to gages, smooth and straight, and at right angles to the axis of the member. The boring shall be accomplished after the member is securely fastened in position.

1.5.6 Welding. Welding operators, welders, and tack welders shall be qualified and, as necessary, requalified for the particular type of work to be done. Qualification shall be in accordance with one of the following codes: Part III, Section 5, of AWS D 1.1; or Section IX of the ASME Boiler and Pressure Vessel Code. The Contractor shall certify by name to the Contracting Officer, the welders and welding operators so qualified including the date of qualification, code, and procedures under which qualified. Prior qualification may be accepted provided the welder has performed satisfactory work under the code for which qualified within the preceding three months. The Contractor shall require the welder or welding operator to repeat the qualifying tests when, in the opinion of the Contracting Officer a reasonable doubt as to the welder's proficiency is indicated by performance of the work. In such cases, the welder shall be recertified, as above, if the retest is successfully completed; otherwise, the welder shall be disqualified until a retest has been successfully completed. All expenses in connection with qualification and requalification shall be borne by the Contractor.

1.5.6.1 Steel. Unless otherwise authorized or specified, welding of steel shall be accomplished by an electric arc welding process, using a method which excludes the atmosphere from the molten metal. The welding of steel unless specified otherwise, shall conform to the applicable provisions of AWS D 1.1.

1.5.7 Bolted Connections.

1.5.7.1 Bolts, nuts and washers shall conform to the applicable requirements of Paragraph 15A-7.5.11 for the types required. Beveled washers shall be used where bearing faces have a slope of more than 1:20 with respect to a plane normal to the bolt axis.

1.5.7.2 Holes for regular bolts shall be drilled or subdrilled and reamed in the shop. Holes shall be accurately located, smooth, perpendicular to the member and cylindrical.

1.5.7.3 Holes for fitted bolts shall be match-reamed or drilled in the shop. Holes shall be smooth, perpendicular to the member and cylindrical. Burrs resulting from reaming shall be removed. The threads shall be entirely outside of the holes. The body diameter of the bolt shall have tolerances as recommended by ANSI B 4.1 for the class of fit specified. Fitted bolts shall be fitted in reamed holes by selective assembly to provide an LN-2 fit.

1.5.7.4 Holes for high-strength bolts shall be accurately spaced, cylindrical and perpendicular to the member. If the thickness of the material is greater than the diameter of the bolt, the holes shall be either

drilled full size or shall be subdrilled and then reamed to full size. Poor matching of holes will be cause for rejection. Drifting occurring during assembly shall not distort the metal or enlarge the holes. For slight mismatching, reaming to a larger diameter for the next standard size bolt will be allowed.

1.5.8 Shop Assembly. Unless otherwise specified, the rehabilitated pump shall be assembled in the shop to determine the correctness of the fabrication and matching of the component parts. The tolerances shall not exceed those specified or shown on the contract or manufacturing drawings and each assembled unit shall be closely checked to ensure that all necessary clearances have been provided and that binding does not occur in any moving part. Assembly in the shop shall be in the same position as final installation in the field unless otherwise specified. Assembly and disassembly work shall be performed in the presence of a Government inspector, unless waived in writing by the Contracting Officer, and any errors or defects disclosed shall be immediately remedied by the Contractor, without cost to the Government. Before disassembly for shipment, each piece of a machine or structure shall be match-marked to facilitate erection in the field. The location of the match-marks shall be indicated by circling with a ring of white paint after the shop coat of paint has been applied, or as otherwise directed.

1.5.9 Materials and Material Standards. Materials not specifically described shall, as far as practicable, conform to the latest specifications of ASTM or to the other listed commercial specifications covering the class or kinds of materials to be used. Designated materials shall conform to the following specifications, grades and classifications:

<u>Material</u>	<u>Specification, Grade, Class</u>
Aluminum-Bronze Castings	ASTM B 148, Alloy No. C95500
Bronze	ASTM B 98, Alloys No. 651 and No. 655
Structural Steel	ASTM A 36
Stainless Bars and Shapes	ASTM A 276, Grades S30400, S41600 and S41000

1.6 SAFETY. The Contractor shall be responsible for selection of plant operating equipment to ensure safe removal and installation of the equipment specified herein, based upon the local working conditions, including site-specific restrictions for utilities, access or environmental conditions. The Contractor shall provide all equipment and labor required for ventilation, unwatering, and debris removal in order to ensure a safe working environment in accordance with EM 385-1-1, Safety and Health Requirements Manual, dated October 1992, as well as any local, state, or national codes which apply to the work or work environment.

1.7 FIELD SERVICE REPRESENTATIVE. The pump rehabilitation shop field service representative shall have the following qualifications:

a. Three years experience in the erection, installation and operational testing of pumping units similar to those being rehabilitated under this contract.

b. Formal training in the installation of such equipment. The Representative's resume of experience, training, and pertinent education shall be submitted to the Contracting Officer for approval, a minimum of 30 days prior to the disassembly and shipping of the pumps.

1.8 WARRANTY. The warranty on the pumps and motors rehabilitated under this section shall conform to the requirements of SPECIAL CLAUSES 00800-22 COMMERCIAL WARRANTY and Contract Clause WARRANTY OF CONSTRUCTION.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 PUMP REHABILITATION.

3.1.1 General. The Contractor shall remove, rehabilitate and return on line each of the pumps specified for rehabilitation. The Contractor shall further coordinate its work with the Metro-East Sanitary District through the Contracting Officer in order to minimize the impact on pump station operations.

Following is a list of the pumps scheduled for rehabilitation at the North Pump Station -

Two Fairbanks Morse Single Stage, No. 8 Figure 6360, Vertical Propeller Pumps: Motor - 25 Hp, Speed - 1750 rpm

Pump No. 1 Serial No. PT 4769 Pump No. 2 Serial No. PT 4770.

3.1.2 Disassembly/Removal. The Contractor shall remove each of the pumps according to the approved Disassembly/Removal plan. Care shall be taken not to damage any of the adjacent building or equipment. There are removable roof hatches over each of the pumps that can be used during pump removal and installation. These hatches shall be put in the closed position whenever work is not ongoing at the pump station. The Contractor can use the existing overhead crane provided that this is coordinated with MESD. The Field Service Representative for the pump rehabilitation shop shall be present during the disassembly and removal of each pump. PLEASE NOTE: Each pump and motor shall not be removed as one piece.

3.1.3 Preparation for Shipment. After removal, the pump components shall be placed in sturdy, reusable, and reshippable wooden crates that will satisfactorily support and restrain them. All items shall be shipped to the shop performing the rehabilitation.

3.1.4 Rehabilitation.

3.1.4.1 General. The Contractor shall have the rehabilitation work performed by a pump service organization regularly engaged in pump rehabilitation work and familiar with this type pump.

3.1.4.2 General Inspection. The Contractor shall have the shop performing the rehabilitation completely disassemble the pump rotating elements, blast clean and inspect all parts for wear and mechanical damage in excess of industry recommended tolerances. The Contractor shall notify the Contracting Officer when the pump disassembly is completed and all measurements and evaluations are complete. The Contractor shall provide a list of recommended repairs to the pump in addition to those specified below. The Contracting Officer shall have 15 days to inspect the disassembled pump and discuss with the Contractor the recommendations. If after the inspection of the pump any additional work to that specified below is required, an equitable adjustment to the contract price will be made as determined by the Contracting Officer, in accordance with the Contract Clause entitled "Changes".

3.1.4.2.1 Shaft Inspection. All intermediate and motor shafts shall be dye penetrant and ultrasonic inspected for cracks and a determination made in concurrence with the Contracting Officer as to its serviceability or replacement. In the event of a conflict of opinions, the Contracting Officer's decision will be final. Dye penetrant inspection shall be performed in accordance with the requirements of ASTM E 165. Ultrasonic inspection shall be performed in accordance with the requirement of ASTM A 388. Both tests shall be conducted by personnel qualified as Level III under the provisions of ASNT CP-189. Copies of the Level III Inspector Certification for all inspectors involved in the work shall be submitted to the Contracting Officer for approval, prior to performing the work.

3.1.4.2.2 Impeller Inspection. The impeller shall be visually inspected to determine any pitting, gouging or other cavitation damage and any cracks and shall be repaired as specified below if any damage is discovered. If the visual inspection does not reveal any damage the impeller shall be dye penetrant inspected by a Level III inspector for cracks. The dye penetrant inspection and the Level III inspector shall meet the requirements specified above.

3.1.4.3 Bowl Section Repair. The suction bell and pump bowl assemblies shall be repaired by welding or epoxy metal repair and remachined. Cavitation or corrosion damage in this area in excess of 0.050 inch in depth shall be repaired and then remachined to the proper Inside Diameter (I.D.). The repair procedure shall be submitted to the Contracting Officer for approval. For estimating purposes the Contractor shall assume that the damaged area that requires repair shall be equivalent to 100 square inches per pump.

3.1.4.4 Rotating Element Repair. The Contractor, as a minimum, shall replace all bearings, sleeves, bushings, and grease seals. All other packing, gaskets and seals not otherwise specified shall be replaced with equivalent components. Bearings shall be bronze and of the same type as the existing bearings.

3.1.4.6 Impeller Repair. Impeller repairs, if required, shall be made using a brazing material of a composition similar to the impeller material, that is then ground smooth and flush with the adjacent metal. Both the brazing procedure and the filler material shall be submitted to the Contracting Officer for approval prior to the repair work. Precise vane shape and all tolerances, including perpendicularity and concentricity, shall be maintained. The impeller shall be restored to its original design specifications. If impeller repairs are required an equitable adjustment to the contract price will be made as determined by the Contracting Officer, in accordance with the Contract Clause entitled "Changes".

3.1.4.7 Impeller Balancing. The impeller shall be statically and dynamically balanced with a half key attached in its keyway at speeds up to 110 percent of its operating speed. The impeller shall be balanced to produce a maximum vibration velocity of 0.0392 in/sec. (Equivalent to the "Very Good" region in the IRD Mechanalysis General Severity Chart.) The Contractor shall submit certified test reports of the impeller balancing to the Contracting Officer for approval.

3.1.4.8 Pump Shaft. A new pump shaft shall be provided for each pump. The shafts shall be fabricated from Type 416 stainless steel and shall have a nominal diameter equal to that of the existing pump shaft. The threaded coupling between the pump shaft and the intermediate shaft shall also be replaced.

3.1.4.9 Shaft Enclosing Tubes. All existing shaft enclosing tubes shall be replaced. The shaft enclosing tubes shall be fabricated from steel pipe or tubing of the same size as the existing tubes. The shaft enclosing tubes shall have internal threads to match the threads on the bearing housings.

3.1.4.10 Flange Repair. Each flanged connection below the operating floor shall have the register fit between each flange repaired. The repair shall consist of placing weld material around both the male and female registers and machining the register fits to the correct tolerances. The correct tolerances are size (within 0.005 TIR), concentricity (within 0.002 TIR), parallelism (within 0.001 TIR), and fit to the mating piece (0.005 - 0.015).

3.1.4.11 Shaft Repairs. The intermediate and motor shafts shall be ground and polished at the bearing surfaces and packing gland.

3.1.4.12 Fastener Replacement. All internal and external bolting shall be replaced with Grade 304 or Grade 410 stainless steel bolts conforming to the applicable requirements of ASTM F 593, and Alloy 651 or Alloy 655 bronze nuts conforming to the applicable requirements of ASTM F

467. New washers shall be provided with the bolts and shall be of the same material as the bolts.

3.2 PAINTING. All interior and exterior surfaces of the pumps, column, head, discharge bowl and appurtenances shall be blast cleaned to white metal and painted in accordance with the applicable portions SSPC Paint 16. Paint shall not be applied to aluminum, rubber, corrosion resisting steel, non-ferrous, finished or machined surfaces nor to galvanized parts.

3.3 OIL LUBRICATION SYSTEM.

3.3.1 General. Each pump has oil lubricated bearings. The Contractor shall supply new solenoid oilers and piping to each of the pumps.

3.3.2 Demolition. The existing solenoid oiler and all existing lubrication piping and accessories shall be removed and shall be disposed of offsite by the Contractor.

3.3.3 Solenoid Oiler. A new solenoid oiler equal in size and similar in type to the existing oilers shall be installed on each pump. Each oiler reservoir shall be filled with the type of oil as recommended by the pump rehabilitation shop. A total of 2 additional gallons of this oil shall be supplied by the Contractor. The Contractor shall be responsible for coordinating the power wiring for the solenoid with the electrical rehabilitation work specified in SECTION 16050 - ELECTRICAL WORK.

3.3.4 Piping. Piping from the new solenoid oilers to the pump shall be accomplished by stainless steel tubing using flared or compression-type connectors.

3.4 REASSEMBLY/REINSTALLATION. The Contractor shall make arrangements with the shop performing the rehabilitation sufficiently in advance to have the Field Service Representative at the pump station within 24 hours of the arrival of the rehabilitated pumps in order to direct its handling, reassembly, reinstallation, and dry and wet testing. The alignment between the pump discharge elbow and the pump discharge pipe shall be checked by the Contractor, the Field Service Representative for the pump rehabilitation shop and the Contracting Officer's representative prior to installation of the flexible couplings.

3.5 FIELD TESTING.

3.5.1 General. After the motor and pump have been installed and coupled together the unit shall be tested. Maximum run time shall be established by the Field Service Representative but shall be no less than 30 minutes for each test. Bearings shall be kept thoroughly lubricated. The Field Service Representative shall be present for all testing.

3.5.2 Vibration Testing. Government personnel will perform the following tests with Government equipment. The Contractor shall provide support services to do this testing as directed by the Contracting Officer.

Two radial and one axial measurement shall be made on the upper and lower motor bearings and on the upper pump bearing (as close as possible). Vibrations found shall be within or below the "FAIR" range, as shown on the General Machinery Vibration Severity Chart, published by IRD Mechanalysis, Inc. of Columbus, Ohio.

3.5.3 Test Problems. Any problems discovered during the tests shall be corrected by the Contractor and the tests reconducted. The corrections and retesting shall be performed at no additional cost to the Government.

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SECTION 15200

SUBMERSIBLE PUMP, CENTRIFUGAL, MIXED-FLOW TYPE- EAST ST. LOUIS PUMP STATION

PART 1 GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, materials and equipment for removal of the existing vertical, long-shaft, baseflow pump and the designing, manufacturing, factory testing, delivering, storing, installing and field testing the new submersible baseflow pump with all necessary discharge pipe modifications complete with all necessary accessories and appurtenances at the East St. Louis Pump Station, as shown on the contract drawings and specified herein. The pump shall be designed, constructed, assembled and tested according to the provisions of the Hydraulic Institute Standards except as noted herein.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all baseflow pump operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including but not limited to the following:

- (1) Machine work and electrical work.
- (2) Shop painting.
- (3) Use of specified materials and equipment.
- (4) Shop assembly
- (5) Factory performance tests.
- (6) Preparation for shipment and storage.
- (7) Inspection at the worksite for damage to and defects in all material and equipment.
- (8) Storage at the worksite.
- (9) Removal of the existing baseflow pump.
- (10) Pump installation.
- (11) Discharge pipe modifications.
- (12) Pump testing.

1.3 REFERENCES. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in

the text by basic designation only.

1.3.1 American National Standards Institute (ANSI).

ANSI B 4.1-67 (R 1994)	Preferred Limits and Fits for Cylindrical Parts
ANSI B 16.1-98	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125 and 250
ANSI B46.1-95	Surface Texture (Surface Roughness, Waviness, and Lay)
ANSI BPV IX-95 (Addenda Dec 95)	Boiler and Pressure Vessel Code; Section IX, Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators

1.3.3 American Society for Testing and Materials (ASTM).

ASTM A 36-97 (Rev. A)	Carbon Structural Steel
ASTM A 48-94 (Rev. A)	Gray Iron Castings
ASTM A 108-95	Steel Bars, Carbon, Cold Finished, Standard Quality
ASTM A 126-95	Gray Iron Castings for Valves, Flanges and Pipe Fittings
ASTM A 276-98 (Rev. B)	Stainless Steel Bars and Shapes
ASTM A 572-98 (Rev. C)	High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM D 2000-98 (Rev. C)	Rubber Products in Automotive Applications

1.3.4 American Welding Society (AWS).

AWS D1.1-96	Structural Welding Code Steel
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1.3.5 Hydraulic Institute (HI) - 1994 Edition.

HI 1.1-1.5	Centrifugal Pumps
HI 1.6	Centrifugal Pump Tests
HI 9.1-9.5	Pumps - General Guidelines

1.3.6 National Electrical Manufacturer's Association (NEMA).

NEMA MG 1-98	Motors and Generators
NEMA WC 7-88 (R 1992)	Cross-Linked-Thermosetting- Polyethylene- Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy

1.4 SYSTEM DESCRIPTION AND PERFORMANCE REQUIREMENTS.

1.4.1 General Project Requirements. Remove the existing baseflow Pump No. 5, modify the discharge piping and furnish and install the new submersible baseflow pumping unit for the East St. Louis Pump Station as described below.

Water pumped will not exceed 80 degrees F, will be relatively turbid, and may contain sand, silt, and trash capable of passing the trashrack, having 3-inch clear openings. The pump shall be of such design that no major modifications, alterations or additions, will be required to the pumping stations and/or suction bays to accommodate it. However, requests for changes in the setting of the pump, discharge pipe and accessories, which would involve only minor modifications, will be considered. Any such modifications will be at the expense of the Contractor. The pump shall be designed such that removal for routine maintenance can be accomplished by use of the existing overhead crane.

The pump, with its appurtenances and cable, shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 50 ft.

1.4.2 Pumping Unit Description. In general, the pumping unit includes the pump/motor, discharge elbow, lifting chain or equivalent hoisting system, guide rails and control/power cables. The pump shall be of the centrifugal, mixed-flow submersible type attached to the same shaft of a submersible electric motor. The pump/motor shall be installed along guide rails or cables and attach to a discharge elbow secured to the floor of the station. Except as otherwise stated or noted, the terms pump and pump/motor both refer to a pump/motor integral unit.

1.4.3 General Design Requirements.

(1) The pump shall meet head, capacity, speed, efficiency, pump sump design, range of operation, cavitation, and vibration requirements as specified.

(2) The pump shall, as a minimum, meet the design, materials, and manufacture requirements of HI 1.1-1.5, HI 2.1-2.5, and HI 9.1-9.5 and these specifications.

(3) The pump shall be connected to a 20-inch discharge shoe. The discharge shoe shall be installed on a concrete pedestal sized and constructed per the pump manufacturer's recommendations. The weight of the pump/motor integral unit and the discharge tube shall not exceed 11,500 lb.

(4) The pump shall be designed for the calculated hydraulic pressure including waterhammer to which the pump parts are exposed.

(5) The pump losses, as calculated by the Contractor, are in addition to the specified head and shall be allowed for when computing the pump system output. The hydraulic quantities are as defined in HI 1.1-1.5, HI 2.1-2.5, and HI 9.1-9.5.

(6) The pump shall have a continuously rising head characteristic with decreasing capacity over the required range of operation specified. The pumps shall not have unstable operating characteristics over the required range of operation.

(7) The pumps shall meet all requirements for net positive suction head required (NPSHR) and operate without surging.

(8) Power and control cables shall be suitable for submersion.

1.4.4 Discharge System. The pump shall discharge through 20-inch discharge pipe and a "duckbill" type rubber check valve into a discharge chamber as shown on the reference drawings.

1.4.5 Operating Conditions. The pump shall be capable of operating in the dry (for the purpose of maintenance and operating checks) for short periods of time as stated in the manufacturer's operating instruction.

1.4.6 Performance Requirements.

(1) The maximum level of vibration of the assembled pumping unit shall not be greater than that allowed in the Hydraulic Institute Standards, Centrifugal Pumps, Paragraph 1.4.6 for vertical, non-clog pumps.

(2) The pump shall be capable of operating without instability over the required range of heads.

1.4.7 Capacities. The pump shall discharge a capacity not less than the capacity indicated against total heads corresponding to static heads with sump elevations as shown in the following table.

Pumping Conditions	Pumping Capacity		TDH Feet	Sump Elevation NGVD
	Required GPM			
Design Operating	15,700		25.0	393.0
High Head	12,000		28.3	393.0

1.4.8 The total dynamic head includes the design static heads plus all of the losses beyond the pump including all friction losses plus the velocity head.

1.4.9 Efficiency. The pump efficiency, as defined in Hydraulic Institute Standards for Vertical Pumps, Paragraph 2.2.6.7, shall be not less than 70 percent at the Design Operating point specified in 15200-1.4.7.1 and shall not be less than 60 percent at the Low Design Operating point specified

in 1.4.7.2.

1.5 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES.

1.5.1 Data.

1.5.1.1 Materials. GA. Submit a list designating materials to be used for each pump part along with the submittal of the drawings. If deviation from specified materials is desired, submit complete specifications for the proposed deviating materials after award of the contract.

1.5.1.2 Equipment Supplies and Performance. GA. Within 60 days of Notice of Award, submit the names of the manufacturers, performance capacities, and other relevant information for the equipment contemplated to be incorporated into the work.

1.5.1.3 Spare Parts. FIO. Submit 7 copies of manufacturer's complete parts list showing all parts, spare parts, and bulletins for pump. Clearly show all details, parts, and adequately describe parts or have proper identification marks. The parts lists shall be printed on good quality 8 1/2 inch by 11 inch paper, bound separately of the Operation and maintenance manual with a flexible, durable cover. Drawings incorporated in the parts lists may be reduced to page size provided they are clear and legible, or they may be folded into the bound lists to page size. Photographs or catalog cuts of components may be included for identification.

1.5.1.4 Computations. GA. Submit sufficient hydraulic computations to substantiate pump selection and demonstrate that the selected pumps can meet the project design and operating requirements as specified.

1.5.2 Drawings.

1.5.2.1 Submersible Pump. GA. Within 60 days of Notice of Award, submit drawings listed below. Submitted drawings shall be of sufficient size to be easily read. Submit information in the English language.

(1) Outline drawings of the pump showing dimensions and weights of the complete pumping unit.

(2) Drawings showing details and dimensions for the pump discharge shoe including any embedded items and the pump installation rails and supports.

(3) Cross-sectional drawings of the pump, showing each component, should show major or complicated sections of each pump in detail. On each drawing indicate an itemized list of components showing type, grade, class of material used, and make and model of the standard component used. Include detail and assembly drawings of the entire pumping unit assembly for each pump.

(4) Pump discharge piping drawings showing the new portions of the pump discharge piping including the flexible coupling and the new "duckbill" rubber check valve.

(5) Complete descriptive specification of the motor furnished, with necessary cuts, photographs, and drawings to clearly indicate the construction of the motor, the treatments used to prevent corrosion of parts, bearing construction, and type of insulation used on all windings.

(6) Nameplate data for the motor.

(7) The capacity-head curve with design points indicated for the pump. The curves shall also indicate efficiency, kW, and NPSHR. Data for required submergence shall also be presented.

(8) Motor characteristic curves or tabulated data (test or calculated) should indicate the speed, power factor, efficiency, current, and kilowatt input, all plotted or tabulated against percent load as abscissas for the motor.

(9) Guaranteed value of motor power factor and efficiency for full load, 3/4 full load, and 1/2 full load.

1.5.3 Instructions.

1.5.3.1 Installation Instruction Manuals. FIO. No later than time of pump delivery, submit three copies of a typed and bound manuals describing procedures to be followed by the installation engineer in installing and dry-and/or wet-testing the pump. The description shall be of such a nature that it may be comprehended by an engineer or mechanic without extensive experience in erecting or installing a pump of this type. The description shall be a step-by-step explanation of operations required, and shall include, where applicable, such things as alignment procedures, bolt torque values, recommended instrument setups, recommended gauges and instruments, and similar details. The Contracting Officer may request changes or modifications to the manuals deemed necessary or desirable.

1.5.3.2 Operation and Maintenance Manuals. FIO. Submit eight (8) copies of the manual for the pump containing complete information on operation, lubrication, adjustment, routine and special maintenance disassembly, repair, reassembly, and trouble diagnostics of pump and motor. The operation and maintenance manuals shall be printed on good quality 8 1/2 inch by 11 inch paper, bound separately from the parts list, and bound between a flexible, durable cover. Drawings incorporated in the manual may be reduced to page size provided they are clear and legible, or they may be folded into the manual to page size. Photographs or catalog cuts of components may be included for identification.

1.5.4 Statements.

1.5.4.1 Installation List. GA. Submit the list of installations where pumps of this type have been provided by the pump manufacturer as specified in paragraph 15161-1.6.

1.5.4.2 Pump Erection Engineer Resume. GA. Submit a resume for each erection engineer to be used a minimum of 30 days prior to installation of the pump tubes.

1.5.5 Reports.

1.5.5.1 Performance Test. FIO. Within 30 days of acceptable performance tests, submit six (6) bound copies of the test report. The performance test report shall include the information required by paragraph 15161-2.8.

1.5.5.2 Motor Tests. FIO. Within 30 days of the specified tests on the motor, submit six (6) bound copies of the motor test report. The motor test report shall include the information required by paragraph 15200-2.9.

1.6 PUMP SUPPLIER EXPERIENCE AND RESPONSIBILITY. The pump shall be designed and manufactured by a firm that is regularly engaged in the manufacture of the type of submersible pump described in these specifications. The pump manufacturer shall have overall responsibility to design and supply the pumping unit (submersible pump/motor, discharge shoe, cables, and accessories) that meet the requirements of this specification. The pump manufacturer shall supply a list of a minimum of 50 installations at which submersible pumps of its manufacture, similar in type to those specified and 100 Hp or greater, have been operating for at least 5 years in the United States.

1.7 SHIPPING AND STORAGE. The pump will be inspected for damage or other distress when received at the project site. The pump and appurtenances shall have adequate short-term storage in a covered, dry, and ventilated location prior to installation. The manufacturer's instructions shall be followed for extended storage. Proper equipment for handling the pump shall be supplied and shall be considered as special tools if not completely standard.

1.8 SPECIAL TOOLS. Furnish one set of all special tools required to completely assemble, disassemble, or maintain the pumps. Special tools refer to oversized or specially dimensioned tools, special attachment or fixtures, or any similar items. Lifting devices required for use in conjunction with a mobile crane shall be furnished.

1.9 PUMP ERECTION ENGINEER. The Contractor shall furnish a competent erection engineer fluent in the English language who is knowledgeable and experienced with the installation and start-up procedures for submersible pumps and the associated equipment specified. The erection engineer shall be a full time employee of the pump manufacturer or shall be designated as an erection engineer, in writing, by the pump manufacturer. A resume shall be submitted for the erection engineer(s) to be used. The resume shall list years of experience in pump field service and a list of installations similar to this one where the erection engineer had been used. When so requested, the erection engineer shall be responsible for providing complete and correct direction during installation, initial starting, and subsequent operation of equipment until all field tests are successfully completed. The erection

engineer shall initiate instructions for actions necessary for proper receipt, inspection, handling, uncrating, assembly, and testing of equipment. The erection engineer shall also keep a record of measurements taken during erection and shall furnish one copy to the Contracting Officer on request or on the completion of the installation of assembly or part. The erecting engineer shall instruct the Contracting Officer or others as designated in the operation and maintenance features of the pump units.

PART 2 PRODUCTS

2.1 MATERIALS AND METALWORK FABRICATION.

2.1.1 General. Classifications and grade of material incorporated in the work shall be in accordance with designated specifications. Material selection shall be guided by HI 1.1-1.5, HI 2.1-2.5, and HI 9.1-9.5 for corrosion, erosion, and abrasion resistance. Deviations from the specified materials shall be submitted in accordance with paragraph 1.4.

2.1.2 Designated Materials. Designated materials shall conform to the following specifications, grades, and classifications.

<u>Materials</u>	<u>Specification, Grade, Class</u>
Cast Iron for Pump Components	ASTM A 48, Class No. 35B
Cast Iron for Pipe	ASTM A 126, Class B
Rubber Products in Automotive Applications	ASTM D 2000
Stainless Bars and Shapes	ASTM A 276, Grades S30400, S41000 and S42000
Structural Quality Steel	ASTM A 36
Structural Steel (High Strength)	ASTM A 572

2.1.3 Bolted Connections.

2.1.3.1 Bolts, Nuts, and Washers. Bolts, nuts, and washers shall conform to requirements herein specified and the paragraphs SUBMERSIBLE PUMP, DISCHARGE TUBE AND DISCHARGE ELBOW, and the subparagraph, NUTS AND BOLTS for types required. Use beveled washers where bearing faces have a slope of more than 1:20 with respect to a plane normal to bolt axis.

2.1.3.2 Materials Not Specifically Described. Materials not specifically described shall conform to the latest ASTM specification or to other listed commercial specifications covering class or kinds of materials to be used.

2.1.4 Flame Cutting of Material. Flame cutting of material other than steel shall be subject to the approval of the Contracting Officer. Shearing

shall be accurately done, and all portions of work neatly finished. Steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a smooth surface free from cracks and notches is secured. Surfaces and edges to be welded shall be prepared in accordance with Section 3 of AWS D1.1. Chipping and/or grinding will not be required except where specified and as necessary to remove slag and sharp edges of technically guided or hand-guided cuts not exposed to view. Visible or exposed hand-guided cuts shall be chipped, ground, or machined to metal free of voids, discontinuities, and foreign materials.

2.1.5 Alignment of Wetted Surfaces. Exercise care to ensure that the correct alignment of wetted surfaces being joined by a flanged joint is being obtained. Where plates of the water passage change thickness, a transition shall occur on the outer surface, leaving the inner surface properly aligned. When welding has been completed and welds have been cleaned, but prior to stress relieving, joining of plates shall be carefully checked for misalignment of adjoining parts.

2.1.6 Machine Work.

2.1.6.1 Fits. All tolerances, allowances and gages for metal fits between plain, nonthreaded cylindrical parts shall conform to ASME B4.1, for the class of fit required.

2.1.6.2 Finishes. Where surface finishes are indicated in the pump shop drawings or specified herein, the symbols used or finishes specified shall be in accordance with ASME B46.1. Values of roughness height specified are the arithmetical average deviation expressed in micro inches. Roughness specified is the maximum value and any lesser degree will be satisfactory unless otherwise called for on the drawings. Compliance with specified surface shall be determined by sense of feel and by visual inspection of the work compared to Roughness Comparisons Specimens, in accordance with the provisions of ANSI B46.1. Values of roughness width and waviness height are not specified, but shall be consistent with the general type of finish specified by roughness height. Flaws such as scratches, ridges, holes, peaks, cracks or checks which will make the part unsuitable for the intended use will be cause for rejection.

2.1.6.3 Pin Holes. Pin holes shall be bored true to gages, smooth and straight, and at right angles to the axis of the member. The boring shall be done after the member is securely fastened in position.

2.1.6.4 Shafting. Unless otherwise specified or authorized, all shafting shall be turned or ground. Fillets shall be provided where changes in section occur.

2.1.7 Castings. Each casting shall have the mark number cast or stamped upon it. Castings not meeting the approved acceptance criteria shall be either rejected or repaired as dictated by the criteria. Repairs to castings shall not be made prior to approval by the Contracting Officer.

2.2 SUBMERSIBLE PUMP

2.2.1 Design and Manufacture. The major components of the submersible pump shall be cast iron. The level of manufacturing skill shall be consistent with the standards referenced in the specifications. All work performed in the manufacture of the pumps shall be performed in a skillful and workmanlike manner in accordance with the best modern shop practice and manufacture of finished products similar in nature to those specified herein. The Government reserves the right to observe and witness the manufacture of the pump and to inspect the pump for compliance with standard good practice during factory assembly.

2.2.2 Vibration. Vibration limits shall be as specified in 1.4.6(1).

2.2.3 Speed. Rotative speed of the pump shall not be greater than 720 rpm.

2.2.4 Pump Construction.

2.2.4.1 General. The major pump components shall be of materials as described in Table 1. The components shall have smooth surfaces, devoid of blow holes, irregularities, and other manufacturing defects. All the exposed nuts and bolts shall be Type 304 stainless steel. All mating surfaces where watertight sealing is required shall be machined and fitted with nitrile rubber O-rings. The fitting shall be such that the sealing is accomplished by metal-metal contact between machined surfaces which result in controlled compression of the O-rings. Sealing compounds, grease, or secondary devices are not acceptable. The pump, with appurtenances and cables, shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 50 feet. The pumps shall be designed, constructed and tested according to the applicable provisions of the Hydraulic Institute Standards.

2.2.4.2 Pump Handling Provisions. The pump shall be designed such that installation and removal shall be accomplished using rails, pipes or cables to guide the pump to or from the discharge shoe. The top of the rails, pipes or cables shall be sufficiently below the operating floor to allow the pump to be completely lowered into the sump area before connecting to the rails, pipes or cables. The rails, pipes or cables shall be supported in a way similar to the way the existing pipes are. The existing 6-inch pipe can be used to support brackets similar to that being used on the existing submersible baseflow pump. Other brackets, if required, shall be fabricated from structural steel and shall be anchored to the concrete wall using drill-in type adhesive anchors. Raising and lowering the pump from the sump shall be accomplished by use of the overhead crane inside the pump station. The pump shall be furnished with a lifting handle to facilitate handling. The lifting handle shall be designed to bear the entire weight of the pumping unit at a conservative factor of safety. A means shall be provided to allow the pump to be removed from the sump in one operation without having to secure the pump and reconnect the hoist hook being used. The Contractor shall follow the manufacturers recommendations for handling of the pump.

2.2.4.3 Discharge System. The pump shall be automatically and firmly connected to the cast iron discharge shoe. There shall be no need for

personnel to enter the wet well to install the pump. Sealing of the pump to the discharge shoe shall be accomplished by a machined metal to metal contact. The entire weight of the pump shall be borne by the discharge shoe. The discharge shoe shall be anchored to a concrete stand at the location and orientation as indicated by the pump manufacturer. The size of the new concrete stand for the discharge shoe shall be determined by the pump manufacturer.

2.2.4.4 Bearings. The pump and motor shaft shall rotate on a minimum of three (3) permanently lubricated bearings. The upper bearing shall be a single roller bearing and the lower bearing shall consist of one angular contact ball bearing and one single row roller bearing. The bearing system shall be capable of handling all up and down vertical thrust loads plus any radial loads. The bearings shall be of the grease lubricated and sealed type. The bearings shall have a minimum B-10 bearing life of 100,000 hours. Each bearing shall be of the correct design to resist the radial and thrust loads applied.

2.2.4.5 Mechanical Seals. A mechanical rotating shaft seal system shall be provided between the propeller and motor to ensure the motor housing seal. The mechanical seals shall be in tandem, lapped and face type seals running in lubricant reservoirs for cooling and lubrication. The lower seal shall contain one stationary and one positively driven rotating tungsten carbide seal ring. The upper seal shall contain one stationary and one positively driven rotating tungsten carbide seal ring. In order to avoid seal failure from sticking, clogging, and misalignment from elements contained in the mixed media, only the seal faces of the outer seal assembly and its retaining clips shall be exposed to the mixed media. All other components shall be contained in the lubricant housing. All seal faces must be solid material capable of being relapped. The seals shall require neither maintenance nor adjustment, but shall be easy to check and replace. Shaft seals without positively driven rotating members shall not be considered acceptable or equal.

2.2.4.6 Impeller. The impeller design and manufacture shall be the manufacturer's standard and shall be constructed of cast iron. The impeller shall be multiple vaned, double shrouded non-clogging design. The impeller surface shall be smooth, without holes, fabrication offsets or acute turns. The impeller shall be capable of handling fibrous materials, heavy sludge, silt and other matter found in sewage applications and shall be capable of passing a 3-inch solid. The impeller shall be keyed to the shaft and retained with an expansion ring. The impeller shall be dynamically balanced at the design operating speed.

2.2.4.7 Shaft. The shaft shall be one piece, integral with the motor, of high-strength stainless steel or high-strength structural steel and shall be completely isolated from the liquid.

2.2.4.8 Volute. The volute shall be cast iron. The volute shall be of non-concentric design with smooth passages large enough to pass the size of solids specified. The hydraulic design shall be the manufacturer's standard design. The internal volute guide vane shall be split to prevent clogging.

2.2.4.8.1 Wear Rings. A Nitrile rubber coated or steel or brass ring insert shall be drive fitted into the volute inlet to provide a sealing system between the volute and the suction inlet of the impeller. A stainless steel wear ring shall be heat-shrink fitted onto the suction inlet of the impeller.

2.2.4.9 Cooling System. The pump shall be provided with an integral, self-supplying cooling system. The cast iron motor water jacket shall encircle the stator housing and shall provide heat dissipation for the motor regardless of weather the motor is submerged or surrounded by air. The water jacket shall be supplied with cooling liquid through two pipes with one pipe discharging low and the other discharging high into the jacket. Two cooling liquid return ports shall be provided. The internal dimensions of the cooling system shall be such to make the system non-clogging. The cooling jacket shall be provided with two flanged, gasketed and bolted inspection ports.

2.2.4.10 Flanges. Flanges shall be machined and bolt holes shall be drilled concentric with the pump shaft vertical centerline. Flanges shall be machined parallel and mounted parallel to a plane that is normal to the pump shaft centerline or discharge centerline. The mating surface on all flanges shall be finished machined to a 125 micro-inch finish or better. Flanges used to determine vertical concentricity shall have a rabbit fit or be fitted with dowel pins so that disassembly does not destroy pump shaft concentricity.

2.2.4.10 Mating Joints. All pump internal mating surfaces where watertight sealing is required shall be machined and fitted with nitrile rubber O-rings. Fitting shall be such that sealing is accomplished by metal-to-metal contact between machined surfaces. This will result in controlled compression of nitrile rubber O-rings without requirement of a specific torque limit. No secondary sealing compounds, rectangular gaskets, elliptical O-rings, grease or other devices shall be used.

2.2.4.11 Nuts and Bolts. All bolts used in assembling the pump and its supporting members including anchor bolts and dowels shall be of corrosion resisting or stainless steel and shall be of the hexagonal head type. All nuts shall be silicon bronze or stainless steel. Cap screws of stainless steel when used with silicon bronze or stainless steel nuts are permitted.

2.2.5 Motor. The motor shall be submersible and of explosion proof design conforming to the requirements of NEMA MG 1. The motor shall be of sufficient size to avoid overload at any of the specified operating points. The motor shall be 3-phase, 60-Hz, 460 V, squirrel cage induction type, NEMA Design B Type. The motor shall be designed for a minimum of 15 starts per hour. The stator windings and stator leads shall be insulated with a moisture-resistant Class F insulation with temperature resistance of 155° C. The stator shall be dipped and baked three times in the Class F varnish and shall be heat shrink fitted into the stator housing. The rotor bars and short circuit rings shall be of cast aluminum or copper. Thermal switches shall be embedded in the stator lead coils to monitor the temperature of each phase winding. These switches shall be set to open at 125° C and shall be used in conjunction with external motor overload protection. The service factor shall be 1.15. The temperature rise above ambient for continuous full load rated conditions and for the class of insulation used shall not exceed the values in NEMA MG 1. The motor shall be rated for continuous duty when submerged.

2.2.5.1 Torque. Starting torque shall be sufficient to start the pump, but in no case less than 60 percent of full-load torque. Break-down torque shall not be less than 200 percent of full-load torque.

2.2.5.2 Locked-rotor Current. The motor shall not have a Locked Rotor Indicating Code higher than F as shown in Table 430-7(b) of the National Electric Code.

2.2.5.3 Starting Capabilities. The motor shall be capable of making a minimum of fifteen (15) starts per hour.

2.2.6 Cable. Power and instrumentation cables shall be specifically designed for use with a submersible pump application and shall conform to the requirements of NEMA WC 7. Submersible cables shall be suitable for continuous immersion in water up to 50 ft. of submergence. Cables shall have an ampacity of not less than 125 percent of the motor full load current. The pump manufacturer shall determine the cable length required for the installation. Except where cables are connected to the motor terminal wiring, cables shall contain no splices in the length from the junction box to the motor.

2.2.6.1 Cable Entry. Power and instrumentation cables shall enter the motor through a sealing system that prevents water entry into the unit and provides strain relief. The cable entry may be comprised of rubber bushings, flanked by stainless steel washers, having a close tolerance fit against the cable outside diameter and the entry inside diameter for sealing by compression of the bushing, or the entry may be sealed by other gland compression methods. The junction chamber at the top of the motor shall contain two distinct and separate terminal boards. One is for the pump controls and the other is for connection of the power cable.

2.2.7 Pump Control and Monitoring. Sensors shall be provided to monitor critical elements of the pumping units. The sensors shall be monitored by the electrical monitoring and control equipment specified in SECTION 16050 ELECTRIC WORK. The sensors shall indicate when a pump component has an abnormal operating condition. As a minimum the following sensors shall be provided:

(1) The stator shall be equipped with three (3) thermal switches, embedded in the end coils of the stator winding (one switch in each stator phase).

(2) Temperature sensor to monitor the lower thrust bearing.

(3) Float-switch sensor positioned to detect liquid leakage before it reaches the motor stator.

(4) A junction box leakage detector.

2.3 DISCHARGE PIPE AND APPURTENANCES.

2.3.1 General. The existing 20-inch discharge system shall be modified

in order to accommodate the new submersible pump. In addition the existing discharge flap gate shall be replaced as specified below.

2.3.2 Discharge Pipe. The Contractor shall design, layout and install 20-inch cast iron discharge pipe from the pump discharge shoe to the existing discharge pipe. The layout shall be such that the pump lifting handle is under the existing floor opening. If the existing horizontal cast iron pipe section is reused then the Contractor shall install a new flexible coupling. If a new section of cast iron pipe is required the new piece can use either a new flexible pipe coupling or a cast iron flanges.

2.3.3 Flanged Joints. All cast iron pipe flanges and fittings shall be according to ANSI B 16.1.

2.3.4 Nuts and Bolts. Nuts and bolts shall be of the hexagonal type. Bolts, including assembly, anchor, harness, and dowels, shall be 300 stainless steel. Nuts shall be bronze; washers shall be 300 series stainless steel.

2.3.5 Flexible Coupling. A flexible coupling, if used, shall be the gasketed, sleeve type, of proper diameter to fit the discharge pipe, and shall be furnished complete with gaskets and bolts and the associated thrust rods and nuts. The middle ring of the coupling shall be a true circular section free from irregularities, flat spots or surface defects. It shall be fabricated into a one-piece element, with all longitudinal joints flush butt welded. After welding, it shall be tested by being cold-expanded a minimum of one percent beyond the yield point to proof-test the weld to the strength of the parent metal. The weld shall then be subjected to an air test for porosity. The thickness of the middle ring shall be at least the nominal thickness of the discharge pipe. The middle ring shall not have a pipe stop. The followers shall be fabricated into one-piece elements from a contoured mill section by being flush butt welded and then cold-expanded as required for the middle ring. The followers shall be of sufficient strength to accommodate the number of bolts necessary to obtain adequate gasket pressure. The shape of the followers shall be of such design as to provide positive confinement of the gasket. Coupling bolts shall be the elliptic-neck, track-head type with rolled threads. All bolt holes in the followers shall be oval for greater strength. Gaskets shall be composed of either a natural or synthetic rubber compounded with other products to produce a material which will not deteriorate from either age, heat or exposure to air under normal storage conditions. The compound shall also possess the quality of resilience and the ability to resist cold flow so that the joint will remain sealed and tight indefinitely when subjected to shock, vibration, pulsation and temperature changes in the discharge pipe. The material shall have been in general use for at least ten years and shall have the following characteristics:

Durometer: 75 +/- 5

Compression set: 6% maximum immediately
 4% maximum in 30 minutes
 3% maximum in 3 hours

Compression set shall be determined upon 3/4-inch diameter by 1/2-inch thick discs, cut from 3-inch diameter plaques, subjected to 600 psi for 48 hours at room temperature.

2.3.6 Flanged-End "Duckbill" Check Valve. A flanged "duckbill" check valve installed by the Contractor at the end of the 20-inch discharge pipe in the discharge chamber. The check valve shall be all rubber and flow operated check type with a flanged end connection. The port area shall contour down to a duckbill which shall allow passage of flow in one direction while preventing reverse flow. The flange and flexible duckbill sleeve shall be one piece rubber construction with nylon reinforcement. The bill portion shall be thinner and more flexible than the valve body, and formed into a curve of 180 degrees. The flange drilling shall match that of the existing discharge pipe flange in the discharge chamber. The valve shall be furnished with steel back-up rings for installation. Manufacturer must have available flow test data from an accredited hydraulics laboratory to confirm pressure drop data. Company name, plant location, valve size and serial number shall be bonded to the check valve.

2.4 PAINTING. The pump/motor and the discharge shoe shall be painted in accordance with the pump manufacturer's standard coating system. Any fabricated items, such as support brackets, shall be hot dip galvanized.

2.5 SHOP ASSEMBLY. The pump and motor shall be assembled in the manufacturer's plant to ensure the proper fitting and alignment of all parts. Prior to disassembly, all parts shall be match-marked to facilitate the correct assembly in the field.

2.6 NAMEPLATE. The pumping unit shall be identified by means of a separate nameplate permanently affixed in a conspicuous location. The plate shall bear the manufacturer's name, model designation, serial number if applicable, and other pertinent information such as horsepower, speed, capacity, type, and direction of rotation. The plate shall be made of corrosion-resistant metal with raised or depressed lettering and a contrasting background.

2.7 INSTRUCTION PLATES. The pumping unit shall be equipped with suitably located instruction plates, including any warnings and cautions, describing any special and important procedures to be followed in starting, operating, and servicing the equipment. Plates shall be made of corrosion-resistant metal with raised or depressed lettering and a contrasting background.

2.8 PERFORMANCE TESTS.

2.8.1 General. The pump to be supplied shall be tested at the manufacturer's test facility to demonstrate that the pump operates without instability and complies with specified performance requirements. Instability is defined when any point in the usable range of the head-capacity curves cannot be repeated within 3 percent or when a test point deviates from the normal curves by 2 percent. When this occurs, the test shall be rerun. Compliance with specifications will be determined from curves required by the Paragraph 15200-1.5.2.1. Test procedures, except as herein specified, shall be in accordance with applicable provisions of HI 1.6, HI 2.6 and HI 9.1-9.5. The temperature of the water used for testing shall be approximately the same for all tests run and shall be recorded during test runs. Under no

circumstances shall the specified performance tests be waived.

2.8.2 Sump Elevations. Sump elevations used shall be those specified in the paragraph 15200-1.4.7. Test results with each sump elevation shall meet all specified conditions of capacity, head, Hp and NPSHA.

2.8.3 Performance Tests. Performance of the pump to be installed shall be determined by a series of test points sufficient in number to develop a constant speed curve over the range of total heads corresponding to the requirements of paragraph 15200-1.4.7. The range of total heads for the tests shall be from a minimum of 17.0 ft. to a maximum of 50.0 ft. Testing shall be inclusive for the speed involved. Tests shall be made using suction water elevations equivalent to Elev. 393.0. Head differentials between adjacent test points shall not exceed 2.0 feet, but in no case shall less than 10 points be plotted in the pumping range. If the plot of the data indicates a possibility of instability in the head verses capacity curve, a sufficient number of additional test points shall be made to clearly define the head-capacity characteristics. Should the test results indicate that the performance is not the same in all respects for both sump elevations specified, the pump manufacturer shall take whatever corrective action is necessary to produce congruent results. If congruent results cannot be obtained, the test results obtained shall be considered to be those of true pump operation.

2.8.4 Test Results. Test results shall be plotted to show the total head, static heads, Hp, efficiency and NPSHR as ordinates. The results should be plotted against pump discharge in gal/min as the abscissa. Curves shall be plotted showing pump performance to a scale that will permit reading the total head and NPSHR directly to 0.5 feet, capacity to 500 gal/min, efficiency to 1 percent, and power input to 25 Hp. It shall be established that the performance requirements of these specifications and the warranties under this contract have been fulfilled. The performance test shall be made with the pump and motor assembled as an operating unit to simulate field installation unless otherwise approved in writing by the Contracting Officer. Readings shall be taken at a minimum of five points, including one point each within 2 percent of the rated total head, minimum expected head, and maximum expected head. The tests shall be conducted in accordance with and, unless otherwise specified, use the procedures and instruments used in HI 2.6.

2.9 MOTOR TESTS.

2.9.1 General. The motor shall be given a complete test.

2.9.2 Certification. Certified copies of the results of a complete test for duplicate equipment will be accepted in lieu of the complete test as specified in the above subparagraph for equipment of the respective rating and type. No substitute will be accepted for the check test.

2.9.3 Complete Test. A complete test of a motor shall include the following:

- (1) Excitation Test (no load test).

(2) Performance and Speed-Torque Test (Pony brake or other equivalent pump method).

(3) Cold and Hot Resistance Measurement. Test result values shall be plotted on semilogarithmic graphs, the insulation resistance values as logarithmic ordinates and the temperature values as uniform abscissas. For comparison purposes, a curve indicating the safety operating value of insulation resistance shall be plotted on the same sheet with the insulation resistance - temperature test curve.

(4) Vibration Measurement In accordance with MG 1-12.06 or MG-1-20.53 of NEMA MG 1.

(5) Conformance Test. In accordance with MG 1-20.48 of NEMA MG 1.

2.9.4 Test Reports. A test report shall be prepared for the motor.

PART 3 EXECUTION

3.1 DEMOLITION.

3.1.1 General. After the new submersible baseflow pump has been delivered to the jobsite the Contractor shall begin removal of the existing baseflow pump and appurtenances and some other equipment.

3.1.2 Equipment to be Removed. The following equipment and appurtenances shall be removed and disposed of as specified.

(1) Existing vertical baseflow pump and motor, including the interconnecting shaft and lubrication equipment. The motor and pump shall be delivered to the MESD storage yard, 6200 Forest Blvd., East St. Louis, IL 62204.

(2) Any of the 20-inch discharge piping from the existing vertical baseflow pump that will not be used for the new submersible baseflow pump. The existing flexible pipe coupling shall be removed and disposed of off-site.

(3) Two 24-inch suction line gate valves, located in the sump, including the operating stems.

(4) The existing sump pump and all appurtenant piping inside the sump.

(5) Existing concrete pedestal that the existing baseflow pump is installed on.

(6) Existing 20-inch flap gate at the end of the discharge pipe.

(7) All the abandoned sanitary piping inside of the sump.

3.1.3 Disposal. The baseflow pump and motor, any unused 20-inch discharge pipe and the 24-inch suction line gate valves shall be transported,

by the Contractor, to the MESD storage yard, 6200 Forest Blvd., East St. Louis, IL 62204. All other equipment and materials shall be disposed of, by the Contractor, at offsite locations. The Contractor shall insure the disposal sites meet all Federal, State and local regulations for the types of material disposed of.

3.2 INSTALLATION. Correct installation of the pumping unit shall be the Contractor's responsibility and shall be in accordance with the drawings and with the pump manufacturer's installation instruction manuals. The Contractor shall furnish all bolts, shims, tools, and other devices necessary for installing the pumping units. The pump erection engineer shall supervise the complete handling, installation, start-up, and all specified testing of the equipment as required in paragraph 15200-1.9.

3.3 CLEANUP PRIOR TO START. After the pumping unit is installed and prior to start-up, complete clean up of the sump area, of any accumulated construction debris shall be done. A representative of the Contracting Officer will witness this final cleaning of these areas. Any damage to the pumping unit during initial start-up due to foreign objects left in the sump areas shall be corrected at the Contractor's expense.

3.4 PUMP FIELD TESTS.

3.4.1 General. All field tests shall be at the expense of the Contractor in order to determine if the pump has been properly installed and connected. All field testing shall be conducted by an experienced pump manufacturer's representative. Before initially energizing the pump/motor, the Contractor shall have successfully tested all pump control, monitoring, and protective circuits. This thorough electrical checkout procedure shall have followed detailed step-by-step test plans.

3.4.1.1 Wet Test. The Contractor, at his expense, shall conduct a wet test on the pumping unit after installation is complete. The water level in the forebay/sump area must be no lower than Elev. 394.0 NGVD prior to the start of the test. The pump erection engineer shall be present for the tests. The duration of the test shall be as recommended by the pump manufacturer but shall be not less than 30 minutes unless the water elevation drops below the minimum pumping level. The Contractor shall record the date of the test, the duration of the test, the water level in the sump, the power voltage, current for each phase and power factor. The Contractor shall record these values at least every five minutes during the test. Should this test reveal a design or installation deficiency or a manufacturing error in pumping unit components, the problem shall be promptly corrected by the Contractor and the tests redone.

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SECTION 15300
FLEXIBLE FLAP VALVES - EAST ST. LOUIS PUMP STATION

PART 1 - GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, materials, equipment and designing, manufacturing, factory assembly, delivering and storing to remove and dispose of the three existing shutter gates and installing and testing three new flexible flap valve assemblies at the East St. Louis Pump Station, complete with all appurtenances, as required to comply with the specifications and the reference drawings.

1.2 QUALITY CONTROL

1.2.1 General. The Contractor shall establish and maintain quality control for all sluice gate operations to assure compliance with the contract requirements and maintain records of quality control for all construction operations including but not limited to the following:

- (1) Use of specified materials and equipment.
- (2) Shop fabrication and assembly.
- (3) Preparation for shipment and storage.
- (4) Inspection at the worksite for damage to and defects in all material and equipment.
- (5) Storage at the work site.
- (6) Cleaning of work areas.
- (7) Removal of existing shutter gates.
- (8) Installation and field tests.

1.2.2 Reporting. A copy of the records of inspection and tests, as well as the corrective action taken, shall be furnished to the Government, as directed by the contracting officer.

1.3 REFERENCES. The following publications of the issues listed below, but referred to hereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

A 36-00a

Carbon Structural Steel

A 240-99	Heat-Resisting Chromium and Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels
A 276-00a	Stainless Steel Bars and Shapes
A 582-95b	Free-Machining Stainless Steel Bars
B 21-96	Naval Brass Rod, Bar and Shapes
B 98-98	Copper-Silicon Alloy Rod, Bar and Shapes
C 1107-99	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)

1.3.2 American Welding Society.

D10.4-86 (R 1992)	Recommended Practices for Welding Austenitic Chromium Nickel Stainless Steel Piping and Tubing
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1.4 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.4.1 Design Data. GA. Submit computations to substantiate the sizing of the flap valve assembly including those which determine head loss through the valve.

1.4.2 Materials. GA. Submit a list designating materials to be used for each flexible flap valve component along with the submittal of the drawings.

1.4.3 Drawings. GA. Submit complete shop drawings of the gate slides, frames, guides, thimbles, gate stems, wedges, stem couplings, gate hoist, and appurtenances. Drawings of any items made specially or specifically for this project shall be true shop drawings, but catalog cuts will be sufficient for gate operator and outline drawings of these operators may be used in the assembly drawings. Items for which true shop drawings are not required shall be submitted with sufficient descriptive data and/or other information, in addition to the catalog cuts, to demonstrate compliance with the specifications. The embedded items and structural openings and clearances, which are dependent upon the gate design, shall be included with the shop drawings.

1.4.4 Manuals. All manuals and parts lists shall be bound separately, shall be approximately 8-1/2 inches by 11 inches, printed on good quality paper and bound between flexible, durable covers. Drawings incorporated in the manual and/or parts lists may be reduced to page size provided they are clear and easily legible, or may be folded into the manual to page size. Photographs and/or catalog cuts of components may be included for

identification. The operation and maintenance manual and parts lists shall be submitted at the time of shipment of the flexible flap valves.

1.4.4.1 Installation Manual. FIO. A minimum of 30 days prior to shipment of the flexible flap valves the Contractor shall submit three (3) copies of the manufacturer's standard manual describing procedures to be followed by the field service representative in installing and adjusting the flexible flap valve assemblies and appurtenances. The description shall be of such a nature that it may be comprehended by an engineer or mechanic without extensive experience in erecting items of this type. The description shall be a step-by-step explanation of operations required, and shall include, where applicable, such things as alignment procedures, bolt torque values and similar details.

1.4.4.2 O&M Manuals. FIO. Submit seven (7) copies of all operation and maintenance, and repair manuals for the flexible flap valves. The Contractor shall furnish manuals containing complete information in connection with the operation, adjustment, routine and/or special maintenance, disassembly, repair and reassembly of the flexible flap valves furnished under this section. The Contractor shall furnish copies of the manufacturer's spare parts lists and/or bulletins for the flexible flap valves and appurtenances furnished. These lists and/or bulletins shall clearly show all details and parts, and all parts shall be adequately described and/or have proper identification marks. The operation and maintenance manual and parts lists shall be submitted at the time of shipment of the gate hoists.

1.4.5 Field Service Representative Resume. GA. Submit a resume for each erection engineer to be used a minimum of 30 days prior to removal of the pumps for rehabilitation.

1.5 PREPARATION FOR SHIPMENT AND STORAGE AT THE WORKSITE.

1.5.1 Preparation for Shipment. Prior to shipment from the manufacturer's plant, the Contractor shall prepare the flexible flap valve assemblies and appurtenances for shipment as described herein. All large, bulky and/or heavy elements shall be mounted on skids or pallets of ample size and strength to facilitate loading and unloading. All small parts shall be boxed in sturdy wood or heavy corrugated paperboard boxes. A packing list, indicating the contents of each such box and enclosed in a moisture-proof envelope, shall be securely fastened to the outside of the box. The skid and/or pallet mounting and the boxing shall be done in a manner which will prevent damage to the equipment and materials during loading, shipment, unloading, storage, and any associated and/or subsequent handling. Any special slings, strongbacks, skidding attachments, or other devices used in loading the equipment at the manufacturers' and/or fabricators' plants shall be furnished for unloading and handling at the destination and shall become the property of the Government unless otherwise directed by the Contracting Officer.

1.5.2 Storage. The Contractor shall store all materials and equipment to be furnished until actual installation. Equipment shall be maintained and protected from damage prior to installation, as recommended by the

manufacturer. Upon delivery at the worksite, the flexible flap valve assemblies, may be stored outdoors provided these assemblies are stored on wood blocking not less than 8 inches above a base of washed gravel or crushed stone not less than 2 inches thick.

1.6 FIELD SERVICE REPRESENTATIVE. The Contractor shall furnish the services of a competent field service representative from the factory to supervise, direct, inspect and the installation of the flexible flap valve assemblies as specified herein. The field service representative shall be a full-time employee of the valve manufacturer and shall be designated as such in writing by the valve manufacturer, shall have had at least five years of field service experience with the type of valve furnished under these specifications, and shall be subject to the approval of the Contracting Officer. The services of the field service representative shall be furnished at no extra cost to the Government. The installation of the flexible flap valve assemblies under the direction and supervision of the field service representative shall in no way relieve the Contractor of sole responsibility for the flexible flap valves meeting all requirements of the specifications and fulfilling all the Contractor's guarantees.

1.7 SAFETY. The Contractor shall be responsible for selection of plant operating equipment to ensure safe installation of the equipment specified herein, at the worksite, based upon the local working conditions, including site-specific restrictions for utilities, access or environmental conditions. The Contractor shall provide all equipment, labor and power, required for ventilation at the worksite in order to ensure a safe working environment in accordance with EM 385-1-1, Safety and Health Requirements Manual, as well as any local, State, or National codes which apply to the work or work environment. The Contractor shall test the air quality for toxicity, flammable gas and percentage of oxygen content prior to entering, and continuously during any work in an enclosed area. The Contractor shall use an air quality monitor from a recognized manufacturer to test the air quality.

1.8 WARRANTY. The Contractor shall furnish to the Government, under separate cover, the manufacturer's standard commercial warranty for the flexible flap valves.

PART 2 - PRODUCTS

2.1 EQUIPMENT TO BE INSTALLED. The following equipment, together with all necessary accessories and appurtenances, shall be installed. The following paragraphs may at times describe or refer to only one item, assembly or arrangement, but these requirements shall apply to all such items, assemblies or arrangements furnished under these specifications.

Three (3) 84-inch x 84-inch Flexible Flap Valve Assemblies

2.2 DESIGN. The flexible flap valves and appurtenances shall be products of a manufacturer who has been regularly engaged during the past five years in the production of similar-sized and type flexible flap valves for the design heads specified herein. Liberal safety factors shall be used in the

design of the flexible flap valves. Based on the specified heads, working stresses shall not exceed the lower value of either one-third of the yield strength or one fifth of the ultimate strength of the material. The flexible flap valve assemblies shall be designed for installation in the discharge chamber of the East St. Louis Pump Station at the locations shown on the reference drawings.

2.3 WORKMANSHIP. All workmanship, whether in the factory or the field, shall be performed in a skillful and workmanlike manner by qualified mechanics under competent supervision and direction and in accordance with the best modern practice for the various trades involved and for the manufacture of high-grade machinery. All parts shall have accurately machined mounting and bearing surfaces so that they can be assembled without fitting, chipping or remachining. All parts shall conform to the design dimensions and shall be free of all defects in either workmanship or material that will impair their service. All attaching bolt holes shall be accurately drilled to the layout indicated on the shop drawings.

2.3.1 Welding. All welding on the frame shall meet the applicable provisions of AWS-D10.4.

2.4 MATERIALS. All materials shall be free from defects and imperfections, of recent manufacture and unused, and of the classifications and grades specified herein unless otherwise approved by the Contracting Officer. Material not specifically described shall, as far as practicable, conform to the latest specifications of the American Society for Testing and Materials. All materials, supplies and articles not manufactured by the Contractor shall be the products of recognized reputable manufacturers. Samples of materials shall be submitted for approval when so directed. Equipment, materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

2.4.1 Rubber. Neoprene for the flexible cover and the lip seals shall meet the applicable requirements of ASTM D2000.

2.4.2 Stainless Steel. Stainless steel for frame, reinforcing angles, retaining bars, lifting eyes and lifting angles shall meet the applicable requirements of ASTM A 240, Type 304. Stainless steel for fasteners, including all nuts and bolts, shall meet the applicable requirements for ASTM A 276, Type 302 or 304 or ASTM A 582, Type 303.

2.4.3 Bronze. Bronze for adjusting screws and lock nuts shall meet the applicable requirements of ASTM B 98 for Copper Alloy No. 651 or No. 655.

2.5 FLEXIBLE FLAP VALVES AND APPURTENANCES.

2.5.1 Flap Valve Design Requirements. The flexible flap valves shall be designed to open whenever the stormwater pump is operating. Losses through the flap valve assembly shall not exceed 0.25 ft. of head with a discharge of 420 cfs through the valve assembly. Each flexible flap valve assembly shall consist of no more than four separate flexible flap valves. Each flexible flap valve shall be designed to withstand a maximum seating head of 25.0 ft.

The flexible flap valve assembly and each of the valves shall be specifically designed for a pump discharge application.

2.5.2 Frame. The frame shall be fabricated from stainless steel and shall be designed to be bolted to the existing wall thimbles used for the existing shutter gates. The Contractor shall take measurements from the existing shutter gates to determine the existing bolt pattern. The frame shall be fabricated such that the angle of the frame seat to the vertical position shall be between 2 degrees and 5 degrees. The frame shall be provided with lifting eyes at the top for handling and installation.

2.5.3 Cover. Each cover shall consist of a sheet of neoprene rubber with stainless steel reinforcing angles attached. The number and size of the reinforcing angles shall be determined based on the seating head requirements specified in 15300-2.5.1. The angles shall be attached to the cover by bolting the angle to the cover using a stainless steel retaining bar along the backside of the cover. The cover shall also be provided with a stainless steel lifting handle to allow manual opening of the cover to flush any debris. The cover shall be bolted and clamped to the frame with a stainless steel retaining bar and bolts. A PVC spacer shall be placed between the frame and the neoprene cover. This top connection shall be located sufficiently above the opening to allow full pump discharge flow with a gradual bend in the cover.

2.5.5 Lip Seals. A neoprene rubber lip seal shall be bolted to the sides and bottom of the frame using stainless steel retainer bars.

2.5.11 Fasteners. All fasteners shall be of either silicon bronze or stainless steel. Stainless steel bolts and studs shall be provided with bronze nuts. The quantity and size of fasteners shall be as recommended by the flexible flap valve manufacturer.

PART 3 - EXECUTION

3.1 SHOP ASSEMBLY. Each flexible flap valve assembly shall be completely assembled, in the vertical position, and the top cover connections adjusted to insure that the covers will open freely and to insure a proper seal between the cover and the frame seat. Any additional adjustment needed to achieve this condition shall be performed and any discrepancies or deficiencies discovered as a result of this procedure shall be corrected.

3.2 DEMOLITION. The existing shutter gates shall be removed by the Contractor, transported and stored at the MESD storage yard, 6200 Forest Blvd., East St. Louis, IL 62204. The Contractor shall not begin removal operations until the new flexible flap valves have been delivered onsite and the 10-day National Weather Service forecast for the Mississippi River at St. Louis does not have a prediction higher than Stage 10.0. The Contractor shall take care to remove the existing shutter gates such that they are not damaged and could be reused in the event of an emergency. An attempt shall be made to remove the existing mounting bolts. If this is unsuccessful the Contractor shall carefully cut-off the existing nuts taking care to not damage the

threads on the existing bolts or damage the existing shutter gate frame. After removal of the existing shutter gate frame the face of the wall thimble shall be thoroughly cleaned of any old seals or mastics.

3.3 FIELD INSTALLATION AND TESTS.

3.3.1 Installation. Installation of the flexible flap valve assemblies shall be in accordance with the manufacturer's installation instructions and under the supervision and direction of the field service representative specified in Paragraph 15300-1.6. The gate frame and cover shall be cleaned of any protective coatings used thereon during shipment and storage, and all rust, dirt, grit and other foreign matter shall be removed. The flexible flap valve assembly shall be carefully and accurately aligned so that after it is fastened in place there will be no binding or excessive pressure or wear in any moving part and no distortion of any member. Where the frame is attached to the existing wall thimble, apply mastic to the wall thimble contact surface per the flap valve manufacturers recommendation. Fasteners shall be tightened uniformly and firmly, but care shall be taken not to overstress either the fastener or the member with which it is associated. Where specific torque values or ranges are cited in the installation instructions, an accurately calibrated torque-wrench, having the proper capacity range, shall be used. Stilson wrenches, cold chisels, or other tools likely to cause injury to the surface of any part, shall not be used in the work of assembly or tightening. All fasteners shall be installed with an anaerobic locking compound. Cleaning prior to application of the locking compound shall follow the manufacturer's recommendations.

3.3.2 Field Tests. If there is sufficient water in the pump station sump and forebay each of the stormwater pumps shall be operated so as to test the design and installation of the flexible flap gate assemblies. If there are any problems encountered with the flexible flap valves during the tests the valves shall be adjusted or repaired as necessary at no expense to the Government. The tests shall then be reconducted.

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SECTION 16050 - ELECTRICAL WORK

PART 1 GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, material and equipment to construct the power and control systems as indicated on the drawings and specified herein. Major items of construction are as listed below:

- (1) Removal of existing base flow pump starter and wiring from existing motor control center. (East St. Louis Pump Station)
- (2) Installation of new base flow pump motor starter in existing motor control center to include new pump monitoring and control module (PMCM). (East St. Louis Pump Station)
- (3) Removal of raceway, junction boxes, conductors and associated appurtenances. (East St. Louis Pump Station)
- (4) Installation of new raceway, power and control wiring, and associated appurtenances. (East St. Louis Pump Station)
- (5) Relocate conduits and junction box on roof. (North Pump Station)

1.2 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.2.1 Data. GA. Within thirty (30) days of Notice to Proceed, the Contractor, shall submit catalog numbers, cuts, drawings and other information for major items of electrical equipment including but not limited to the following:

- (1) Conduit and cable
- (2) Junction boxes
- (3) Base Flow Pump Starter to include pump monitoring and control module (PMCM)

1.2.2 Reports. FIO. Certified reports of the original qualifying tests specified in paragraph 16050-1.7 shall be submitted.

1.3 APPLICABLE PUBLICATIONS. The latest issues of following publications listed below, but referred to thereafter by basic designation only, form a part of the specifications to the extent indicated by the reference thereto:

- 1.3.1 American National Standards Institute (ANSI).

B 1.1-89

United Inch Screw Threads (UN and UNR Thread Form)

C 2-96 National Electrical Safety Code

C 80.1-90 Rigid Steel Conduit, Zinc Coated

1.3.2 American Society for Testing and Materials (ASTM).

B 8-95 Concentric-Lay-Stranded Copper Conductors, Hard,
Medium-Hard, or Soft

1.3.3 Institute of Electrical and Electronics Engineers (IEEE).

No. 383-74 Class IE Electric Cables, Field Splices, and
(R 1992)Connections for Nuclear Power Generating
Stations

1.3.4 National Electrical Manufacturers Association (NEMA).

ICS 4-93 Industrial Control and Systems Terminal Blocks

WC 7-88 Cross-Linked-Thermosetting-Polyethylene-
(Rev 1992)Insulated Wire and Cable For the
Transmission and Distribution of Electrical
Energy

WC 8-88 Ethylene-Propylene-Rubber-Insulated Wire and
(Rev 1992)Cable for the Transmission and
Distribution of Electrical Energy

1.3.5 National Fire Protection Association (NFPA).

70-02 National Electrical Code

1.3.6 Underwriters' Laboratories (UL).

UL 44-91 Rubber-Insulated Wires and Cables(Rev 1996)

UL 514B-89 Fittings for Conduit and Outlet Boxes
(2nd Ed. 1992; errata 1991; Bul. thru 1994)

UL 1063-95 Machine-Tool Wires and Cables

1.4 DELIVERY AND STORAGE. Equipment specified in this section comprised of electronic and electrical components shall be scheduled for shipment to arrive on the job site no more than thirty days prior to its scheduled installation date. Upon delivery at the work site, the Contractor shall store all electrical and/or electronic equipment as recommended by the equipment manufacturer. The Contractor shall be responsible for storage and protection of all electrical equipment.

1.4.1 Unheated Storage. The following equipment shall be stored in Contractor-provided weather protected storage facilities.

- (1) Insulated wire and cables.
- (2) Conductor accessories.
- (3) Conduit fittings.
- (4) Boxes.
- (5) Motor Control Center Equipment.

1.4.2 Outdoor Storage. The following equipment shall be stored in Contractor-furnished facilities either outdoor or as described in Paragraph 16050-1.4.1.

- (1) Cable reels with completely sealed ends.
- (2) Conduit

1.5 OSHA COMPLIANCE. Equipment and installation shall conform to the applicable safety and health standards promulgated pursuant to the Federal Occupational Safety and Health Act of 1970 which are in effect 30 days prior to the date of quotation or bid.

1.6 CODE COMPLIANCE. All work, specified herein or shown on the drawings, shall conform to the applicable rules of NFPA Code No. 70 National Electrical Code, and ANSI C2 National Electric Safety Code.

1.7 TESTS, INSPECTIONS, AND VERIFICATIONS.

1.7.1 Cable Data. Manufacture of the wire and cable shall not be started until all materials to be used in the fabrication of the finished wire or cable have been approved by the Contracting Officer. Cable data submitted shall include dimensioned sketches showing cable construction, and sufficient additional data to show that these specifications will be satisfied.

1.7.2 Inspection and Tests. Inspection and tests of wire and cable furnished under these specifications shall be made by and at the plant of the manufacturer, and shall be witnessed by the Contracting Officer or an authorized representative, unless waived in writing. The Government may perform further tests before or after installation. Testing in general shall comply with Section 6 of NEMA WC 7 or Part 6 of NEMA WC 8. Specific tests required for particular materials, components, and completed cables shall be as specified in the sections of the above standards applicable to those materials, components, and cable types. Tests shall also be performed in accordance with the additional requirements specified below.

1.7.2.1 Flame Tests. All multiple-conductor and single-conductor cable assemblies shall pass the IEEE Std 383 flame tests, paragraph 2.5, using the ribbon gas burner. Single-conductor cables and individual conductors of multiple-conductor cables shall pass the flame test of NEMA WC 7, paragraph 7.7.3.1.3. If such tests, however, have previously been made on identical cables, these tests need not be repeated. Instead, certified reports of the original qualifying tests shall be submitted. In this case the reports furnished under paragraph, "REPORTS", shall verify that all of each cable's

materials, construction, and dimensions are the same as those in the qualifying tests.

1.7.2.2 Independent Tests. The Government may at any time make visual inspections, continuity or resistance checks, insulation resistance readings, power factor tests, or dc high-potential tests at field test values. A cable's failure to pass these tests and inspections, or failure to produce readings consistent with acceptable values for the application, will be grounds for rejection of the cable, and replacement at no additional cost to the Government.

1.7.2.3 Reports. Results of tests made shall be furnished. No wire or cable shall be shipped until authorized. Lot number and reel or coil number of wire and cable tested shall be indicated on the test reports.

1.8 WARRANTY. The manufacturer's standard warranty, as offered to the public, shall apply under this contract. The Contractor shall require any subcontractors, manufacturers, or suppliers to furnish their warranties directly to the Government. The Contractor shall warranty all workmanship for a period of one year after final acceptance of the work provided for herein. Warranty time shall begin upon final acceptance of the equipment or material by the Contracting Officer and shall not be included in the calendar days for completion.

PART 2 PRODUCTS

2.1 GENERAL. Materials and equipment submitted for approval shall be the standard cataloged products of concerns regularly engaged in the manufacture of the products and shall be the latest standard design that conforms to the specification requirements without modifications. Equipment for the same, similar, or allied service shall be of the same manufacture and type and, when of the same rating, shall be interchangeable. The Contractor shall submit to the Contracting Officer, for approval, a list of equipment proposed for use in the project. The list shall give sufficient information concerning the items to show compliance with the specifications. All material furnished for use within the existing motor control center shall be approved by the manufacturer, General Electric Co. for use with the GE Series 8000 Motor Control Center line.

2.1.1 Materials. All materials, components, and equipment shall conform to the requirements of these specifications and shall be of high quality, free from defects and imperfections, of recent manufacture, and shall be suitable for the intended use and operating voltage. Particular care shall be taken to provide materials and equipment with long life, liberal factors of safety, and suitable operating characteristics for installation in areas with abundant and persistent moisture at the site. All materials, components, and equipment shall be products of recognized reputable manufacturers.

2.2 CORROSION PREVENTION.

2.2.1 General. All equipment furnished under these specifications shall be designed to prevent deterioration from corrosion. The general requirements to be followed are specified below, and additional special treatments or requirements considered necessary for any individual item is specified under the respective item.

2.2.2 Fastenings and Fittings. Where practicable, all screws, bolts,

nuts, pins, studs, springs, washers, and such other miscellaneous fastenings and fittings shall be of an approved corrosion resisting material or shall be treated in an approved manner to render them resistant to corrosion.

2.2.3 Corrosion-Resisting Materials. Corrosion-resisting steel, copper, brass, bronze, and copper-nickel, and nickel-copper alloys are acceptable corrosion-resisting materials. However, contact between dissimilar metals shall be avoided wherever practicable, except where one of the dissimilar metals is steel, or in the case of wiring and connections.

2.2.4 Corrosion-Resisting Treatments. Galvanizing, sherardizing, and zinc, cadmium, and copper plating, when properly done, and of a sufficiently heavy coat, are approved corrosion-resisting treatments. Other corrosion-resisting treatments may be used if approved by the Contracting Officer.

2.3 CONNECTIONS. All bolts, studs, machine screws, nuts, and tapped holes shall be in accordance with ANSI B 1.1 Threads for sizes 6mm to 25mm, inclusive, shall be NC or UNC series. Manufacturer's standard thread and construction may be used on small items which, in the opinion of the Contracting Officer, are integrally replaceable, except that threads for external connections to these items shall meet the above requirements.

2.4 CONDUIT AND FITTINGS.

2.4.1 Rigid Steel Conduit. Rigid steel conduit (RGS) shall meet requirements of ANSI C 80.1, and shall be zinc coated inside and out by the hot dip galvanizing process. All conduit shall be rigid steel conduit unless otherwise specified or shown on the drawings. Intermediate metal conduit (IMC) and electrical metallic tubing (EMT), recognized by NEC Articles 345 and 348, will not be acceptable for this project. Minimum size of RGS conduit shall be ¾".

2.4.2 Steel Conduit Fittings. Steel conduit fittings shall meet the applicable requirements of UL 514B.

2.4.3 Expansion Fittings. Expansion fittings for steel conduit shall be of watertight construction with means to ensure electrical continuity of the conduit run and to prevent damage to cables.

2.4.4 Insulating Bushings. Insulating bushings shall be the hot dip galvanized threaded grounding type.

2.4.5 Junction and Pull Boxes. All metal junction and pull boxes shall be of stainless steel of the types and sizes shown on the drawings, as otherwise specified or required by the National Electrical Code. All boxes shall be provided with stainless steel cover screws and suitable synthetic rubber gaskets, and shall be bossed, drilled and tapped, as required. Boxes installed in walkways shall have cross-ribbed, checkered covers. Prior to pulling conductors, installed boxes that are exposed to the weather shall have covers in place to prevent rusting. The Contractor shall be responsible for field routing all conduits and for placing junction boxes in conduit runs that exceed the manufacturer's recommended cable pulling tensions.

2.5 INSULATED WIRE AND CABLE.

2.5.1 Wire Table. Wire and cable shall be furnished in accordance with the drawings, and as necessary for proper operation of all equipment as

specified herein or in other sections. Unless specified otherwise all wire and cable shall conform to the detailed requirements specified herein.

2.5.2 Rated Circuit Voltages. All wire and cable shall have minimum rated circuit voltages in accordance with Table 3-1 of NEMA WC 7 or NEMA WC 8.

2.5.3 Conductors.

2.5.3.1 Material. Conductors shall conform to all the applicable requirements of Section 2 of NEMA WC 7 or Part 2 of NEMA WC 8 as applicable and shall be annealed copper. Copper conductors may be bare, or tin- or lead-alloy-coated, if required by the type of insulation used.

2.5.3.2 Size. Unless otherwise specified or shown on the drawings, minimum wire size shall be No. 12 AWG for power and lighting circuits; No. 10 AWG for current transformer secondary circuits; No. 14 AWG for potential transformer, relaying, and control circuits.

2.5.3.3 Stranding. Conductor stranding classes cited herein shall be as defined in Appendix L of NEMA WC 7 or NEMA WC 8, as applicable. Lighting conductors No. 10 AWG and smaller shall have Class B stranding. Any conductors used between stationary and moving devices, such as hinged doors or panels, shall have Class H or K stranding. All other conductors shall have Class B or C stranding, except that conductors shown on the drawings, or in the schedule, as No. 12 AWG may be 19 strands of No. 25 AWG, and conductors shown as No. 10 AWG may be 19 strands of No. 22 AWG.

2.5.3.4 Separator Tape. Where conductor shielding, strand filling, or other special conductor treatment is not required, a separator tape between conductor and insulation is permitted.

2.5.4 Insulation.

2.5.4.1 Insulation Material. Insulation shall be cross-linked thermosetting polyethylene (XLPE) type, meeting the requirements of Section 3 or paragraph 7.7 of NEMA WC 7 as applicable, or an ethylene-propylene rubber (EPR) type meeting the requirements of Part 3 of NEMA WC 8.

2.5.4.2 Insulation Thickness. The insulation thickness for each conductor shall be based on its rated circuit voltage.

- (1) Power Cables/Single-Conductor Control Cables, 2,000 Volts and Below. The insulation thickness for single-conductor cables rated 2,000 volts and below shall be as required by Table 3-1, Section 3 of NEMA WC 7 or Table 3-1, Part 3, of NEMA WC 8, as applicable. Column "A" thickness of Table 3-1 of NEMA WC 7 will be permitted only for single-conductor cross-linked thermosetting polyethylene insulated cables without a jacket. NEMA WC 8 ethylene-propylene rubber-insulated conductors shall have a jacket. Column "B" thickness shall apply to single-conductor cables that require a jacket and to individual conductors of multiple-conductor cables with an overall jacket.
- (2) Multiple-Conductor Control Cables. The insulation thickness of multiple-conductor cables used for control and related purposes shall be as required by Table 7-32 of NEMA WC 7 or Table 7.5.1 of NEMA WC 8 as applicable.

2.5.5 Jackets. All cables shall have jackets meeting the requirements of Section 4 of NEMA WC 7, or Part 4 of NEMA WC 8, as applicable, and as specified herein. Individual conductors of multiple-conductor cables shall be required to have jackets only if they are necessary for the conductor to meet other specifications herein. Jackets of single-conductor cables and of individual conductors of multiple-conductor cables, except for shielded cables, shall be in direct contact and adhere or be vulcanized to the conductor insulation. Multiple-conductor cables and shielded single-conductor cables shall be provided with a common overall jacket, which shall be tightly and concentrically formed around the core. Repaired jacket defects found and corrected during manufacturing are permitted if the cable, including jacket, afterward fully meets these specifications and the requirements of the applicable standards.

2.5.5.1 Jacket Material. The jacket shall be one of the materials listed below. Variations from the materials required below will be permitted only if approved for each specific use, upon submittal of sufficient data to prove that they exceed all specified requirements for the particular application.

- (1) General Use.
 - a. Heavy-duty black neoprene (NEMA WC 8).
 - b. Heavy-duty chlorosulfonated polyethylene (NEMA WC 8).
 - c. Heavy-duty cross-linked (thermoset) chlorinated polyethylene (NEMA WC 8).

2.5.5.2 Jacket Thickness. The minimum thickness of the jackets at any point shall be not less than 80 percent of the respective nominal thickness specified below.

(1) Multiple-Conductor Cables. Thickness of the jackets of the individual conductors of multiple-conductor cables shall be as required by Section 4, Table 4-6 of NEMA WC 7 or Part 4, Table 4-4 of NEMA WC 8, and shall be in addition to the conductor insulation thickness required by Column B of Table 3-1 of the applicable NEMA publication for the insulation used. Thickness of the outer jackets or sheaths of the assembled multiple-conductor cables shall be as required by Section 4, Table 4-7, of NEMA WC 7 or part 4, Table 4-5, of NEMA WC 8.

(2) Single-Conductor Cables. Single-conductor cables, if nonshielded, shall have a jacket thickness as specified in Section 4, Table 4-4 of NEMA WC 7 or Part 4, Table 4-2 of NEMA WC 8. If shielded, the jacket thickness shall be in accordance with the requirements of Section 4, Table 4-5 of NEMA WC 7 or Part 4, Table 4-3 of NEMA WC 8.

2.5.6 Identification.

2.5.6.1 Color-coding. Insulation of individual conductors of multiple-conductor cables shall be color-coded in accordance with Paragraph 5.3 of NEMA WC 8, except that colored braids will not be permitted. Only one color-code method shall be used for each cable construction type. Power cable color-coding shall be black for Phase A, red for Phase B, blue for Phase C, white for grounded neutral, and green for an insulated grounding conductor, if

included. Other individual conductors may be color-coded as indicated on the contract drawings but such color-coding may be accomplished by applying colored plastic tapes or sleeving at terminations.

2.5.7 Cabling. Individual conductors of multiple-conductor cables shall be assembled with flame-and moisture-resistant fillers, binders, and a lay conforming to Part 5 of NEMA WC 8, except that flat twin cables will not be permitted. Fillers shall be used in the interstices of multiple-conductor round cables with a common covering where necessary to give the completed cable a substantially circular cross section. Fillers shall be non-hygroscopic material, compatible with the cable insulation, jacket, and other components of the cable. The rubber-filled or other approved type of binding tape shall consist of a material that is compatible with the other components of the cable and shall be lapped at least 10 percent of its width.

2.5.8 Dimensional Tolerance. The outside diameters of single-conductor cables and of multiple-conductor cables shall not vary more than 5 percent and 10 percent, respectively, from the manufacturer's published catalog data.

2.5.9 Materials for Cable Splices - 600 Volts or Less.

2.5.9.1 Connectors. Connectors shall be copper compression type, single indent for 250 MCM and smaller and double indent for 300 MCM and larger.

2.5.9.2 Rubber Tape. Rubber tape shall be self-fusing, 30 mil, EPR based.

2.5.9.3 Plastic Tape. Plastic tape shall be 8.5 mil, cold and weather-resistant tape.

2.6 CABLE, CONDUIT AND EQUIPMENT IDENTIFICATION.

2.6.1 General. All cables, conduit, and equipment shall be properly identified by tags as specified below.

2.6.2 Cable Tags (600V and Below). Single conductor phase cables 1/0 AWG and larger, and all multiple conductor cables shall be tagged at each junction box (without terminal blocks), pullbox, handhole, and at entry to and exit from conduit, using cable tags as specified in paragraph 16050-2.6.3.

2.6.3 Conductor Tags (600V and Below). Tags shall be wraparound, polyester film, self-laminating markers, and shall be preprinted with the circuit number. No tags shall be handwritten. Tags shall be furnished and installed as specified below.

2.6.3.1 1/0 AWG and Larger. Single conductor phase cables 1/0 AWG and larger and all multiple conductor cables shall be tagged at all termination points. The tags shall indicate circuit number and phase.

2.6.3.2 2 AWG and Smaller. Single conductor phase cables 2 AWG and smaller shall be tagged at all termination points and in each junction box and pull box. Phase identification for power cables shall be color-coded in accordance with Paragraph 16050-2.5.7.1.

2.6.4 Conduit Designation. All conduit shall be identified at the terminals and where they leave concrete and masonry by means of suitable die-

stamped brass tags, or other approved means, to show designations as indicated on the drawings.

2.7 MOTOR CONTROL CENTER WORK

2.7.1 General. The Contractor shall remove the existing starter for base flow pump #4. A new starter shall be provided for the new base flow pump provided under Section 15200 - SUBMERSIBLE PUMP, CENTRIFUGAL, MIXED-FLOW TYPE. The new starter shall be installed in the vacated MCC compartment. All material and equipment installed in the motor control center shall be approved by General Electric Co. for use with the existing GE 8000 Series Motor Control Center. All work shall be as shown on the drawings

2.7.2 Terminal Blocks.

2.7.2.1 Control Circuits. Terminal blocks for control wiring shall be molded or fabricated type with barriers, rated not less than 600 volts. The terminals shall be removable binding, fillister or washer head screw type, or of the stud type with contact and locking nuts. The terminals shall be not less than No. 10 in size and shall have sufficient length and space for connecting at least two indented terminals for No. 19/22 AWG conductors to each terminal. Modular terminal blocks will be acceptable provided they are of the channel or rail-mounted type.

2.7.2.2 Power Circuits. Load terminal blocks rated not less than 600 volts and of adequate current carrying capacity shall be provided for the motor lead conductors. The terminals shall be of either the stud type with contact nuts and locking nuts or of the removable screw type, having length and space for at least two indented terminals of the size required on the conductors to be terminated. For conductors rated more than 50 amperes, screws shall have hexagonal heads. Conducting parts between connected terminals shall have adequate contact surface and cross-section to operate without overheating. Each connected terminal shall have the circuit designation or wire number placed on or near the terminal in permanent contrasting color.

2.7.2.3 Designations. Each device to which a connection is made shall be assigned a device designation in accordance with Part ICS 1-101 of NEMA ICS 1 and each device terminal to which a connection is made shall be marked with a distinct terminal marking corresponding to the wire designation used on the schematic and connection diagrams. Special attention shall be given to wiring and terminal arrangement on the terminal blocks to permit the individual conductors of each external cable to be terminated on adjacent terminal points. The wire (terminal point) designations used on the wiring diagrams and printed on terminal block marking strips may be according to the standard practice; however, additional wire and cable designations for identification of remote (external) circuits may be required. Prints of drawings submitted for approval will be so marked and returned to the Contractor for addition of the designations to the terminal strips and tracings, along with any rearrangement of points required. Wiring diagrams shall be in a form showing physical arrangement of the motor control center bucket with interconnecting wiring shown by lines or by terminal designations (wireless).

2.7.3 Control Accessories. Control accessories shall be provided, and shall be suitable for mounting on the front of, or inside, the control centers as indicated on the drawings. Control accessories shall meet the applicable requirements of NEMA ICS 2 and be approved by General Electric Co. for use with the existing GE 8000 Series Motor Control Center.

2.7.4 Pump Monitoring and Control Module (PMCM). To protect the new base flow pump, a pump monitoring and control (PMCM) module shall be furnished by the pump manufacturer for mounting on the backside of the panel door of the motor control center motor starter. The contractor shall furnish a new MCC bucket door with a Plexiglas-windowed opening for clear viewing of the PMCM LEDs for alarm and status. The PMCM shall have the following functions:

- (1) Stator leakage alarm and trip
- (2) Motor junction box leakage alarm and trip
- (3) Stator temperature to trip whenever the first 1 or more of the 3 PTC thermistors embedded in the stator winding reaches within 5°C of 155°C, the maximum rated temperature for a Class F-insulated motor
- (4) Lower pump bearing temperature alarm and trip using a platinum 100°C RTD.

PART 3 EXECUTION

3.1 GENERAL. The general arrangements and approximate locations of the electrical equipment, conduit and wiring connections shall be as indicated on the drawings. The Contractor may, however, subject to the approval of the Contracting Officer, modify the layout indicated on the drawings or specified herein, to more readily conform to the space available and to the equipment proposed for use. Should the approved electrical equipment furnished be of a different size than indicated on drawings, the Contractor at its own expense shall make the necessary adjustments to the branch circuit wiring (8 AWG and below), disconnecting devices, and branch-circuit protection, to accommodate the equipment actually installed.

3.2 WORKMANSHIP. Workmanship shall be in accordance with the best modern standard practice in the manufacture of high grade equipment of the type specified. Work shall be performed by mechanics, electricians,..etc. regularly engaged in the type of work as specified herein.

3.3 CONDUIT INSTALLATION.

3.3.1 General. Conduit sizes, and approximate locations shall be as on the drawings or as required by the National Electrical Code. The exact location of conduit shall be determined by the Contractor subject to field conditions and the approval of the Contracting Officer. All exposed conduit shall be run parallel or perpendicular to walls and ceilings with right angle turns. Bends and offsets shall be held to a minimum. Where a conduit crosses a construction or expansion joint in the concrete, an approved expansion fitting shall be installed. Field routing of conduit shall be accomplished to avoid interference with piping and other mechanical and structural equipment.

3.3.2 Bends. Field bends may be used if of the proper radius and carefully made with suitable tools so that the conduit is not deformed. No conduit that has been crushed or deformed in any way shall be used. The radius of any field bend shall not be less than that required by Section 346-10 of the National Electrical Code.

3.3.3 Drainage. Provisions shall be made for draining conduits by

sloping them toward the box or termination, where practicable.

3.3.4 Threaded Joints. Ends of metal conduit shall be cut square and reamed to remove rough edges and burrs. Joints shall be made watertight by applying an application of 95% pure zinc, zinc rich cold galvanizing primer (zincit) or approved equal that will provide electrical continuity for the entire conduit system or run. Metal conduits shall provide electrical continuity for the conduit system or run. Threadless fittings or running thread couplings shall not be used.

3.3.5 Supports. All conduits shall be rigidly supported in an approved manner and as a minimum, firstly, in accordance with the drawings, and secondly, where the drawings are silent, in accordance with the National Electrical Code. Clamps for exposed conduit shall be of the one-hole, malleable iron type.

3.3.6 Raceway Bonding. Conduit terminating in sheet metal enclosures shall be bonded to the enclosure using two locknuts, one inside and one outside. The locknuts shall be drawn up wrenchtight. Conduits shall enter the enclosures in the appropriate size knockout. Additionally, the following conduits shall be provided with grounding type, lay-in, insulated bushings and the appropriate size of soft drawn, bare copper bonding wire to bond each conduit to the grounding system and the equipment ground bus or ground lug:

- 1) All conduits which terminate in transformers or motor control centers.
- 2) All underground or embedded conduits which stub up into a floor mounted enclosure such that dual locknuts cannot be installed.

3.3.7 Equipment Bonding.

3.3.7.1 Flexible Conduit Bonds. Where motors or other fixed devices are connected by means of cords or conductors installed in flexible conduit, an identified grounding conductor shall be provided and bonded to the motor or equipment frame. The bonding conductor shall be bonded to the nearest junction box where flexible conduit is used, or to the nearest point of connection to the grounding system.

3.4 WIRE AND CABLE INSTALLATION.

3.4.1 General. All mechanical work, including the installation of cable supports, brackets, hangers, and junction boxes, shall be completed as nearly as possible before installation of any cable. In general, all wire and cable shall be installed in accordance with the drawings. However, where these listings are silent or appear to be subject to interpretation the Contractor shall install all wire and cable in RGS conduit (provided by the Contractor) sized in accordance with the National Electrical Code. Any deviations from this shall be approved by the Contracting Officer in writing. The Contractor shall provide supports, racks, clamps, fittings .etc. as specified, indicated on the drawings or as required for the proper racking and supporting of all cables. The Contractor shall be completely responsible for providing a wire and cable installation that is in accordance with these specifications and the National Electrical Code, and is in the opinion of the Contracting Officer acceptable workmanship. Discrepancies, alternate installation means, differing site conditions...etc., shall be brought to the attention of the Contracting Officer immediately. Conduits and other raceways shall be

installed as a complete system, without gaps, and shall provide physical protection for the entire length of the cables installed. All cables shall be arranged in a neat and orderly manner and shall not cross one another unless unavoidable. Cable and conductor bends shall have the maximum possible radius and in no case shall bends have a radius less than that recommended by the manufacturer. Cables shall be installed with sufficient slack to prevent damage resulting from expansion or contraction or from differential settlement of conduits.

3.4.2 Pulling in Wires and Cables. Before pulling in wires and cables, it shall be shown to the satisfaction of the Contracting Officer that all raceways into which wire or cable is to be drawn are clean and dry. Proper means shall be provided to prevent damage to the cables during the process of pulling. The Contracting Officer shall inspect all cables after pulling and before terminating to ensure cables have not been damaged in this process. If in the opinion of the Contracting Officer a cable has been significantly damaged the Contractor shall remove that cable and pull in an identical replacement at no extra cost to the Government.

3.4.3 Splicing - 600 Volts and Less.

3.4.3.1 General. Cable splices shall be made only in approved junction boxes. If the Contracting Officer deems a splice necessary, the Contractor, at no additional cost, shall install a junction box sized in accordance with the NEC for splicing the circuit.

3.4.3.2 Installation. Splices shall be made as follows:

- 1) The conductor insulation shall be removed and trimmed squarely, so that the insulation touches the connector when the conductors are butted together inside the connector.
- 2) After the connector has been crimped, rubber insulating tape, tightly drawn (width reduced at least one-third) shall be applied over the conductor splice to a thickness of 1-1/2 times the thickness of the original insulation. The full thickness of the tape shall extend beyond the end of the insulation.
- 3) Two half-lapped layers of plastic weather-resisting tape extending one inch beyond the rubber tape at each end shall be applied over the rubber tape. A smooth wrapping shall be made, but the tape shall not be stretched more than necessary.

3.4.3.3 Motor Leads. Submersible pump motor leads terminations shall be made at the pump manufacturer's factory. No field splices shall be allowed. The manufacturer's cables shall be terminated at the pump junction box as shown on the drawings.

3.4.3.4 Terminations. Stranded conductors shall be terminated by means of approved pressure grip (solderless) lugs of the indented barrel type. The barrel of the lugs shall be indented into the conductor using a tool especially designed for the purpose. Tools for installing the connectors shall be subject to the approval of the Contracting Officer.

3.4.4 Testing. Wire and cable shall be given dielectric tests after installation with all taps, splices and terminals in place, but before connecting the terminals to any equipment.

3.4.4.1 Megger Tests. All wires and cables shall be tested using a motor driven megger unless otherwise noted in these specifications. Megger voltages and duration of test shall be as follows:

<u>Operating Voltage</u>	<u>Megger Voltage</u>	<u>Test Duration</u>
151 to 600	1,000	1 Minute
150 and under	500	1 Minute

3.5 MOTOR CONTROL CENTER WORK. All work associated with the motor control center shall be done in accordance with the National Electric Code. Workmanship shall be approved in writing by General Electric Co. The Contractor shall be responsible for proper installation of the pump monitoring and control module (PMCM) provided by the pump manufacturer.

3.6 NORTH PUMP STATION WORK. the Contractor shall remove all conduit and wiring and other electrical appurtenances in order to allow construction of the roof repairs as delineated in other parts of these specifications and shown on the drawings. Upon completion of the roof repairs the electrical equipment shall be re-installed in as close to original condition as possible. Any damaged material shall be brought to the attention of the Contracting Officer. It may be necessary for the Contractor to make minor revisions the new locations of the equipment in order to accommodate the roof repairs.

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